Thumbs Up!
Guarantee for RR Prosperity—p. 9

Engineers Take a Look Ahead—p. 51

RAILWAY AGE

MAR. 11, 1957 • THE INDUSTRY'S NEWSWEEKLY

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Waynesboro
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Now Perishables Travel in Style

Mechanical reefers are big news today—and *good* news to shippers of fresh and frozen foods. These de luxe refrigerator cars carry all types of perishables—quickly, cheaply, and above all safely—to markets all over the country.

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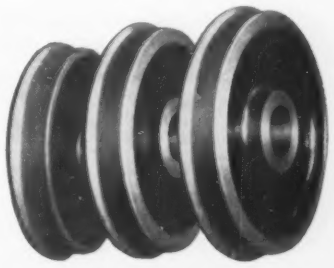

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RAILWAY AGE The Industry's Newsweekly

Vol. 142, No. 10
March 11, 1957

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Railway Age, established in 1856, is a member of the Audit Bureau of Circulation (A.B.C.), the Associated Business Publications (A.B.P.) and the Railway Progress Institute (R.P.I.). It is indexed by the Industrial Arts Index, the Engineering Index Service and the Public Affairs Information Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.

Published weekly by the Simmons-Boardman Publishing Corporation at Orange, Conn., and entered as second class matter at Orange, Conn. James G. Lyne, president. Arthur J. McGinnis, executive vice-president and treasurer. F. A. Clark, vice-president and secretary.

PAID CIRCULATION THIS ISSUE 14,616

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At a railroad management seminar at the University of Michigan speakers gave reasons for expecting a prosperous railroad future, and emphasized certain steps to make this happy prospect a certainty.

Railroads may turn against the 'shall nots' p.11

The industry does not like the Administration's bill which would apply the Cabinet Committee's rate-freedom program to competing carriers of the same type as well as on an inter-agency basis.

Pulpwood car hauls more payload p.46

A search for something more economical and less troublesome has led to a new design for greater-capacity pulpwood cars on the Canadian National. The specialized open-top car is adaptable to all types of mechanical loading and unloading and its design prevents dangerous shifting of loads in transit.

How data is sent card-to-card p.49

The large scale computer in the Chesapeake & Ohio's Cleveland general office is used for payroll and other accounting processes. Data prepared at outlying offices must, occasionally, be transmitted to the computer via wire communications facilities. What the problems are, and how they were solved, is the subject of a report to the railroad's management.

What railroad engineers are doing p.51

Last week's annual convention of the American Railway Engineering Association emphasized strongly that current responsibilities of engineering officers go far beyond technical matters.

Will better service mean some 'inefficiency'? ... p.54

To meet shippers' needs adequately it will be necessary for railroads deliberately to adopt what have been regarded as

Boxcar with Evans 19-belt DF (TM) Loader and Nailable Steel Flooring

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Current Statistics

Operating revenues, twelve months	
1956	$10,550,936,013
1955	10,106,761,916
Operating expenses, twelve months	
1956	$8,108,273,368
1955	7,641,369,403
Taxes twelve months	
1956	$1,121,323,051
1955	1,081,420,746
Net railway operating income, twelve months	
1956	$1,068,343,682
1955	1,128,867,391
Net income estimated, twelve months	
1956	$874,000,000
1955	915,000,000
Average price 20 railroad stocks	
March 5, 1957	90.27
March 6, 1956	100.95
Carloadings revenue freight	
Eight weeks, 1957	5,181,124
Eight weeks, 1956	5,463,427
Average daily freight car surplus	
Wk. ended Mar. 2, 1957	5,982
Wk. ended Mar. 3, 1956	4,436
Average daily freight car shortage	
Wk. ended Mar. 2, 1957	2,225
Wk. ended Mar. 3, 1956	4,240
Freight cars on order	
February 1, 1957	114,656
February 1, 1956	144,946
Freight cars delivered	
One month, 1957	7,822
One month, 1956	4,199
Average number railroad employees	
Mid-January 1957	996,105
Mid-January 1956	1,045,815

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Week at a Glance CONTINUED

inefficient operating methods. So argues J. Edward Jay, economist and former railroad man.

Grotz replies to Shoemaker **p.58**

The Western Maryland president's plan for federal aid to boost freight-car buying has elicited comment from many other railway chief executives—most of it, in general, adverse.

The Action Page—Mr. Arpaia says 'diversify' **p.76**

It's highly significant that the commissioner's advice so closely parallels the opinions of many railroad leaders. With a "climate" like this, it shouldn't be difficult to translate talk into action.

SHORT AND SIGNIFICANT

Trip time trimmed . . .

nine hours by the Pacific Great Eastern on its North Vancouver-Prince George run since introduction of Budd RDC cars. By speeding running time, cutting minor stops and omitting mail service, the 518-mile journey has been reduced from 28 to 17 hours. Added attraction is service of airline-type meals at coach seats.

Slow rail service . . .

has prompted the ICC to authorize refrigerated truck service for meats from Denver to Florida points. The trucker promised to provide third-morning delivery where rail shipments are now delivered on the sixth morning.

Second set of locks . . .

for the Illinois Waterway is being studied by Army Engineers. Predictions now are that river traffic will reach 27,000,000 tons annually in 25 years if Cal-Sag channel improvements at Chicago are completed.

Transportation advertisers . . .

increased their newspaper linage last year 5.7% over 1955's 42,596,291 lines, reports the American Newspaper Publishers Association's Bureau of Advertising. Biggest numerical linage gain last year—a rise of 10%—was made by airlines. Railroad linage rose 0.9%, from 9,713,716 to 9,797,801.

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RAILWAY AGE
The Industry's Newsweekly

ANN ARBOR SESSION EVOLVES . . .

Formula for Rail Prosperity

At the University of Michigan's third annual railroad seminar at Ann Arbor on February 27-28, the subject was "The Railroads—Their Future." The participants, with no exception, foresaw this future in such terms as *prosperous* and even *brilliant*. But good things don't just happen automatically—and the speakers set forth some things that need doing to change possibilities into certainties.

Use Unused Capacity.—The railroads could increase their transportation service to the nation by 50 per cent, with an increase in investment of only 16-2/3 per cent. In this fact lies the industry's great economic strength—a guarantee of future growth and prosperity, if the railroads are permitted to price their services to attract increased traffic volume. President David Smucker of the DT&I made the foregoing assertion, pointing out that railroad investment is two-thirds in fixed property and only one-third in cars and locomotives. Thus, a relatively modest increased investment in railroads would give the nation much more in added transportation service than it could obtain for a similar expenditure in any other form of transportation.

Meantime, the railroads are improving their plant and service—at the rate of over $1 billion annually. The carriers will add greatly to their supply of cars and other capital improvements, just as soon as something constructive is done about traffic-building pricing. Said the speaker: *"Dramatic increases in railroad freight traffic will have the money sources falling all over themselves to get on the band wagon, and new cars will be coming in from all directions."*

What 4,000 HP Will Do.—If you have 4,000 hp at your disposal, you can haul 5,000 tons by rail, or 400 tons by truck, or 85 tons by automobile, or 60 tons by plane. This is the dramatic contrast in utilization of available energy that gives railroad people the right to confidence in the future of their industry. With these figures, President Holcombe Parkes of the Railway Progress Institute introduced his account of the research findings of his organization, as reported in detail in the brochure "Let's Look Ahead and Stay Ahead" (Railway Age Nov. 19, 1956, p. 13).

Mr. Parkes said that the RPI's research supports the belief that railroad freight traffic will grow by more than 40 per cent in the next decade. And growth may also be expected in passenger traffic, he added, after the present period of readjustment has been completed. On every hand he sees evidence of a "renaissance of railroading." A great deal depends, he concluded, on management's decision to plan aggressively for the future.

Passenger Traffic Profits.—There are three areas in which profitable passenger traffic growth is likely, in the opinion of William R. Main, New York Central director of passenger service. These areas are: (1) hauls in the 200-600 mile zone; (2) overnight runs up to 1,200 miles; and (3) commuter service (provided it gets tax relief or some other such support from public "authorities").

Mr. Main believes passengers should be hauled in efficient "unit trains" with reserved seats, with a minimum of intermediate stops, and with delays for head-end traffic eliminated by shifting the bulk of such traffic to railroad truck subsidiaries.

A bright and exciting future for the passenger business—this is what Mr. Main predicted, provided the railroads will adapt their service "to what is, instead of what used to be"; and provided, also, that the public will permit changes in service which are in the long-run public interest.

"Diversification" Advised. — Interstate Commerce Commissioner A. F. Arpaia spoke with fully as much enthusiasm about the future of the railroads as did any of the speakers from the industry itself. Only, he didn't believe present regulation is the handicap that other speakers found it to be. The road to progress, in his opinion, lies in continued improvements in railroad service; and especially in coordination, through service and rates, with other forms of transportation. He looks with favor on joint ownership of several forms of transport—and, where there exist legislative impediments to this, coordination is still possible by cooperation. The recommendations of Commissioner Arpaia are quoted from at length on "The Action Page" in this issue (page 76).

History Made on Feb. 27.—This happened when financiers agreed on that date to make an equipment loan

Here's the Railroad Success Formula:

Make realistic rates—to assure growing volume of profitable tonnage

Emphasize technological superiority—1 hp moves 10 times more tons by rail than by highway

Rationalize passenger service, strengthen the paying business, ease off on the rest

Diversify—offer joint service with other agencies either by common ownership or cooperatively

Educate employees, for better labor relations

Seek new sources of capital by skill in appeal to investors

Regulate all transport alike, or deregulate common carriers so they can defend themselves

Transport Officers Study Operations Research

Thirty-one railroad men representing 16 different railroads attended the February 27-28 Transportation Research Symposium in Lafayette, Ind. Goal of the meeting was "to emphasize and balance in presentation both the point of view of practical operations and that of method or 'management science' innovation." The symposium was conducted by the Department of Industrial Management and Transportation and the Division of Adult Education of Purdue University. Among those in attendance were (above, left to right): John E. Mahoney, assistant to president, Lackawanna; George M. Leilich, vice-president, operations, Western Maryland; Prof. A. Charnes, director of Purdue's Management Sciences Research Group; V. B. Gleaves, assistant to general manager, Frisco; and H. R. Soyster of the Union Railroad of Pittsburgh.

to the C&NW to provide the funds for rebuilding diesel locomotives. So asserted David A. Hill, railroad investment counselor. Thus, he went on to say, a source of investment funds has become available to railroads for a very productive new form of capital expenditure.

Mr. Hill pointed out that railroad credit (as a whole, that is) has never fully recovered from the depression of the thirties. One of the reasons, he said, is the fact that—in wage negotiations with unions—the railroads make public statements which set forth their earnings position in a dim light. And they have to make the same cautious and even pessimistic appraisal of their outlook when they seek rate increases from the ICC. Other industries, not regulated as the railroads are, do not have to "shed tears" in public—and hence enjoy a better reputation with financiers.

In discussing railroad credit, Mr. Hill said it should be appraised company by company. Industry-wide generalizations are not valid.

Favors Fewer Unions.—Labor relations were discussed (and with a great measure of agreement by the two speakers) by Personnel Director Yerby Holman of the Western Maryland and S. C. Phillips, assistant president of the BofLF&E.

Mr. Phillips said he welcomed plant improvement by the railroads; what is now known as "automation" has been going on for a long time on the railroads. These improvements make for "rising productivity," and labor wants its share of the increase. There is a lot of "closing the gap" needed, he added, to bring railroad labor back into the relationship it once held in comparison to employees of other industries. Not opposing labor-saving improvements, Mr. Phillips insisted that the effect of such changes on labor must be "cushioned." He favors fewer unions in the railroad industry —for example, a merger of the enginemen's unions, followed later, perhaps, by one union for all operating employees.

Mr. Holman said that neither railway unions nor companies had been able to achieve their principal objectives, viz., reliably high-level employment (for the unions) and satisfactory earnings (for the companies). Perhaps too many railroads and too many unions are among the reasons why these objectives haven't been realized. He indicated a number of points wherein he believes improved labor relations might be achieved—especially in the area of employee education and by relating wages and working rules to increased production, rather than keeping them (as often now) in the form of penalties.

Control All or Free All.—In his assignment, at the closing session, of summarizing the two day's discussion, J. G. Lyne, editor of Railway Age, devoted particular attention to the defense by Commissioner Arpaia of existing railroad regulation. The speaker conceded that the goal of the ICC—assuring orderly competition in transportation by regulation—is laudable. However, he contended, the goal is unattainable as regulation now stands—with two-thirds of motor carriers and 90 per cent of water carriers unregulated.

"Unless the ICC can persuade Congress to put all 'exempt' transportation (including private) under regulation, then the only fair and practicable alternative is to deregulate the common carriers so that they can engage in any competitive tactics available to their unregulated rivals."

In attendance, in addition to university people, were somewhat over 100 railroaders, representing top and middle management. The seminar was sponsored by the Transportation Institute of the university and the Michigan Railroads Association, with the cooperation of the AAR. Among the university participants were President Harlan H. Hatcher, Director John C. Kohl of the university's Transportation Institute, and Cleland B. Wyllie, managing editor of the University Relations Services. Roob H. Allie, executive secretary of the Michigan Railroads Association, represented that association. F. A. Gaffney, vice-president, GTW, presided at the first day's session and C. J. Milliken, general manager, C&O, was in the chair at the closing session.

House Group to Study Regulatory Agencies

Chairman Harris of the House Committee on Interstate and Foreign Commerce has appointed a special subcommittee to "review, study and examine" the execution of laws by regulatory agencies within the committee's jurisdiction. The Interstate Commerce Commission is among agencies involved.

The subcommittee is headed by Representative Moulder, Democrat of Missouri. Chairman Harris' plan to launch the investigation was revealed last month after House Speaker Rayburn expressed hope that the committee would get into the matter (Railway Age, Feb. 11, p.7).

Railroads May Turn Against 'Shall Nots'

They do not like new Administration bill which would apply Cabinet Committee's rate-freedom program to competing carriers of same type as well as on inter-agency basis

Railroads might oppose the "shall-nots" rate-freedom program embodied in the latest version of the Eisenhower Administration's bill to implement recommendations of the Cabinet Committee.

The bill proposes to apply the "three shall-nots" to competitive rates of carriers of the same type, as well as to rates of competitors operating different types of transport. The original version proposed to apply them on an inter-agency basis only, and that's what the railroads favor. They have no position as yet on the broader proposal.

The Administration bill carries all recommendations of the Cabinet Committee in a proposed "Transportation Act of 1957." It was introduced in the Senate as S.1457 by Senator Magnuson, Democrat of Washington, who is chairman of the Committee on Interstate and Foreign Commerce.

Two like bills were introduced in the House—H.R.5521, by the chairman of that body's Committee on Interstate and Foreign Commerce, Representative Harris, Democrat of Arkansas, and H.R.5522, by the committee's ranking minority member, Representative Wolverton, Republican of New Jersey. The proposed legislation was prepared in the Department of Commerce and submitted to Congress by Secretary Weeks, who headed the Cabinet Committee.

While the secretary of commerce said that changes from the similar bill which died last year were only "clarifying and technical," broadening the rate-freedom proposal is a substantial modification from the standpoint of railroads. However, it could not have been unexpected, since Secretary Weeks proposed it at hearings last year (Railway Age, June 25, 1956, p. 8).

AAR Position — Meanwhile, Messrs. Harris and Wolverton, respectively, have also introduced H.R. 5523 and H.R.5524 which would deal only with the "three shall-nots" and keep them on the original inter-agency basis. It was stated last week at the Association of American Railroads that the association favors these bills. It was also said that the association's attitude as to the broader proposal has not been decided.

The "shall nots" were designed originally to end the Interstate Commerce Commission's "fair-share-of-the-traffic" approach by prohibiting consideration of the effect of proposed rates on another mode of transportation. The new version would prohibit consideration of the effect on carriers "of the same mode" as well as other modes.

Other Proposals — Although railroads have pressed only for enactment of the rate-freedom program, because they considered it of "greatest immediate importance," the Cabinet Committee made several other recommendations (Railway Age, Apr. 25, 1955, p. 49). They include calls for a new declaration of National Transportation Policy, sharper definitions of private and contract carriage, repeal of the bulk commodity exemption applicable to water carriers, curtailment of the ICC's power to suspend rates, liberalization of the fourth section, subjecting section 22 quotations to filing requirements and various other provisions of the act, and more ICC power over abandonments of intrastate rail services.

The Administration bill covers all these matters. The AAR has said the railroad industry supported "in general" the "purposes and objectives" of these proposals.

PRR Expands Its TrucTrain

The Pennsylvania expanded its TrucTrain service on March 6. R. W. Tackbary, TrucTrain manager, said the expansion involves movement of highway trailers of common carrier truckers in special PRR trains between Detroit, Cincinnati and Louisville, on one hand, and Philadelphia and New York, on the other.

(Continued on page 14)

Quicker Way to Get Newspapers On and Off Trains

Passenger-train running times have been cut and newspapers reach distribution points earlier since the Long Island adopted a new newspaper handling system. Key to the system is a hand truck (above), designed by Robert A. Patterson, the road's research manager, which shuttles newspapers between trains and trucks. Ten such units have been built in LI shops. On the first regular day of testing, 7,000 lb of newspapers were loaded in five minutes. Previously, 20 minutes or more would have been required for the operation. It is expected loading time will be reduced even more as experience with the system accumulates.

PROVED!
DEPENDABLE TRACTION MOTOR GEAR LUBRICATION FOR OVER 6 MONTHS WITHOUT GREASE ADDITION!
NEW ESSO ARAPEN GEAR LUBRICANT

Extensive 18 month on-the-road tests by the New York Central Railroad have *proved* that Esso Standard's new Arapen Gear Lubricant gives completely dependable traction motor gear lubrication for well over six months. During the six-month periods *no* additional lubricant was required. Arapen outlasted the previously used lubricant by at least 6 to 1!

NEW YORK CENTRAL SYSTEM

New Esso Arapen Gear Lubricant is another exclusive development of Esso Research. For further information and technical assistance in the use of Arapen Gear Lubricant, call your local Esso office, or write: Esso Standard Oil Company, Railroad Sales Division, 15 W. 51st Street, New York 19, N. Y.

Performance advantages of **ARAPEN GEAR LUBRICANT:**

Reduced Leakage: maintains consistency through full range of operating temperatures, minimizing drippage on ties, pits and station platforms.

Improved Oxidation Stability: permits extended operation without hardening.

Excellent Structure Stability: reduces failures due to dry gears caused by excessive gear case leakage.

Better Anti-Wear Characteristics: high grease retention assures proper gear protection for prolonged time.

Esso

RAILROAD PRODUCTS

MARKET OUTLOOK THIS WEEK

Carloadings Up 12.3% in Week

Loadings of revenue freight in the week ended February 2 totaled 703,984 cars, the Association of American Railroads announced on February 7. This was an increase of 77,348 cars, or 12.3%, compared with the previous week; a decrease of 6,992 cars, or 1%, compared with the corresponding week last year; and an increase of 50,409 cars, or 7.7%, compared with the equivalent 1955 week.

Loadings of revenue freight for the week ended February 23 totaled 626,636 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, February 23

District	1957	1956	1955
Eastern	108,658	117,367	111,144
Alleghany	119,577	140,360	121,412
Pocahontas	59,407	60,041	51,765
Southern	122,722	130,512	121,792
Northwestern	64,475	71,918	67,208
Central Western	105,189	112,029	105,848
Southwestern	46,548	54,791	51,903
Total Western Districts	216,212	238,738	224,959
Total All Roads	626,636	687,018	631,072
Commodities:			
Grain and grain products	46,569	45,503	42,593
Livestock	4,541	6,613	6,043
Coal	130,238	139,311	123,152
Coke	13,521	13,503	10,292
Forest Products	37,514	43,400	41,537
Ore	18,960	19,767	14,066
Merchandise l.c.l.	49,061	55,220	55,879
Miscellaneous	326,232	363,701	337,600
February 23	626,636	687,018	631,072
February 16	675,965	678,319	650,248
February 9	665,251	684,328	638,788
February 2	647,972	680,989	635,779
January 26	665,745	691,850	637,116
Cumulative total, 8 weeks	5,181,124	5,463,427	5,060,539

IN CANADA. — Carloadings for the seven-day period ended February 21 totaled 75,439 cars, compared with 77,503 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
Wk. ended Feb. 21, 1957	75,439	35,359
Wk. ended Feb. 21, 1956	76,388	34,837
Cumulative Totals:		
Wk. ended Feb. 21, 1957	520,198	233,895
Wk. ended Feb. 21, 1956	550,039	253,416

New Equipment

► *Prices Increased for Rails and Fittings.*—Four railroad suppliers have announced price increases, averaging just under 4%, for rails, tie plates, joint bars and track spikes; announcement of the increases was made by Bethlehem Steel, U.S. Steel and its Tennessee Coal & Iron Division, Inland Steel and Colorado Fuel & Iron.

FREIGHT-TRAIN CARS

► *Bangor & Aroostook.*—Ordered 400 50-ft, 50-ton box cars, ACF Industries; approximate cost $3,750,000; delivery scheduled for next October; 50 cars will be equipped with roller bearings and nailable steel flooring.

► *Mozambique.*—Invites bids for 40 tank cars to transport gasoline, according to Foreign Commerce Weekly; bidding conditions and blueprints available, for about $11, from Office of the General Storekeeper for Mozambique Harbors, Railways and Transport Services, Lourenco Marques, Mozambique.

SPECIAL

► *Chesapeake & Ohio.*—Ordered 100 car sets of box-car doors with aluminum bottom panel from Youngstown Steel Door.

New Facilities

► *Chesapeake & Ohio.*—Union Switch & Signal-Division of Westinghouse Air Brake Company has received an order for 25 sets of automatic control equipment for installation on diesel units recently ordered by the C&O.

► *Delaware & Hudson.*—Authorized $76,000 expenditure this year for extensive improvements at Fort Edward, N.Y., yard; additional facilities, including installation of new lighting, will permit handling increased traffic at Fort Edward, where average cars dispatched per month rose from 2,804 in 1953 to 4,600 in 1956.

► *Santa Fe.*—Ordered from Union Switch & Signal-Division of Westinghouse Air Brake Company signaling equipment for installation of double-track CTC between Olathe, Kan., and Lebo, 68 miles; order includes a new 7½-ft Type C control machine for Emporia, which will work in conjunction with existing 5-ft machine which controls Emporia to Lebo; Olathe to Lebo is now equipped with automatic block signals and intermittent automatic train stop for operation in one direction on each track; new project will provide for either-direction operation on both tracks, and for remote control of switches and crossovers in area; when project is completed, the system will provide for operation in either direction on each track by signal indication between Kansas City, Mo., and Emporia, Kan., 129 miles.

(Continued from page 11)

The service provides second-morning delivery in both directions, and is in addition to the railroad's "all-rail" TrucTrain operation between those cities. This extension of common-carrier TrucTrain raises to 10 the number of metropolitan areas on the PRR receiving the service.

To speed movement of coal and other freight from the Terre Haute area to Chicago, the PRR recently inaugurated through freight service in both directions between Terre Haute and Logansport. Heretofore, such freight has moved via Indianapolis, C. G. Magruder, regional manager of the Southwestern Region, said. "By utilizing the more direct Crawfordsville branch line between Terre Haute and Frankfort we are saving time while relieving the Indianapolis terminal of a corresponding volume of traffic," he added.

C&NW to Drop Pick-Up and Delivery

Notice of its plan to discontinue pick-up and delivery service on March 25 has been filed by the Chicago & North Western with the Interstate Commerce Commission.

While the railroad will continue to provide station to station merchandise or LCL service, it said a substantial part of its loss in such service is incurred in furnishing pick-up and delivery.

The railroad says its pick-up and delivery service is an unjustifiable economic burden on a type of traffic that has been constantly declining as a source of revenue. In 1956 the railroad's expense on pick-up and delivery alone exceeded $1,500,000. This amount, it said, could be put to better use in providing services for which there is a public need.

The railroad pointed out that with numerous alternative competing agencies providing such service, there is no longer public need for it to continue providing pick-up and delivery.

First reaction of shippers to the North Western's proposal was to oppose it strongly. The National Industrial Traffic League implied that the North Western might lose some carload business if it cuts off pick-up and delivery service.

The league's position, voiced by Richard A. Whitty, chairman of its LCL and merchandise committee, is that "pick-up and delivery service should be performed by rail carriers, and the charge should be included in line-haul rates and not stated separately."

Mr. Whitty objected to the proposed action in a letter to the North Western's assistant vice-president, traffic, R. C. Stubbs. "This action on the part of any railroad can only mean it is abandoning all hope or intention of improving or increasing its LCL business," he said.

"Shippers need good LCL rail service. More and more shippers are emphasizing this fact by adopting a policy of giving their carload business to rail carriers who do a good job of handling LCL tonnage. The C&NW will not receive favorable consideration by shippers who follow this policy in the routing of their carload business."

System-Wide Dialing Started by Northern Pacific

First leg of a 2,000-mile transcontinental dial telephone system has been put into service between the Seattle and Tacoma offices and the South Tacoma shops by the Northern Pacific.

The dial system serves some 125 phones in the area. Dial operation is expected to be extended to the road's St. Paul general offices this summer.

'Empire Builder's' Birthday

This 300-lb birthday cake featured the February 23 celebration of the 10th anniversary of the inaugural run of the Great Northern's first streamlined "Empire Builder." Bottom layer of the cake supports an operating model of the present train, running on an 18-ft circular track. Inspecting the cake are, left to right: P. G. Holmes, GN passenger traffic manager; C. E. Finley, traffic vice-president; and Frank J. Gavin, chairman.

Justice Would Have High Court Reject Injury Cases

Justice Frankfurter of the United States Supreme Court has chided his colleagues for continuing to review lower-court rulings in cases arising under the Federal Employers' Liability Act.

The cases involved are suits brought by railroad employees to recover for injuries suffered while on duty. The Frankfurter complaint was embodied in his dissent to the court's action in deciding three FELA cases which he thought should have been dismissed.

The Supreme Court, Justice Frankfurter said, should not be reviewing decisions "in which the sole issue is the sufficiency of the evidence for submission to the jury." To do so, he added, is "wholly incompatible" with the policy embodied in 1916 legislation which made the court's jurisdiction over FELA cases discretionary rather than obligatory.

The majority opinions were in favor of the employees in two cases, while the railroad won the other. The latter was *Herdman v. Pennsylvania*. It involved the injury of a conductor who was thrown to the floor of the caboose when the engineer made a sudden stop to avoid hitting an automobile being driven over a crossing.

A directed verdict in favor of the railroad was entered in the trial court and this was upheld by the U. S. Court of Appeals for the Sixth Circuit. These determinations were based on lack of evidence to support allegations of negligence on the part of the railroad. In upholding them, the Supreme Court said there was no evidence to show that the stop was made "with any special or unusual severity," or that "unscheduled and sudden stops of trains are unusual or extraordinary occurrences."

The employees won in *Webb v. Illinois Central* and *Rogers v. Missouri Pacific*. The former involved the injury of a brakeman who slipped on a partially imbedded cinder. The *Rogers* case involved injury of a section laborer who fell from the top of a culvert after having been enveloped in smoke and flames from burning vegetation and weeds fanned by a passing train. These cases came up from lower appellate courts which had ruled in favor of the railroads, reversing trial-court determinations in favor of the employees.

Justice Brennan delivered the Court's majority opinions. In the *Rogers* opinion, he seemed to have the Frankfurter dissent in mind when he said:

"Cognizant of its duty to effectuate the intention of the Congress to se-

cure the right to a jury determination, this court is vigilant to exercise its power of review in any case where it appears the litigants have been improperly deprived of that determination. . . . In a relatively large percentage of the cases reviewed the court has found that lower courts have not given proper scope to this integral part of the congressional scheme."

52 Passengers Killed In 1956 Accidents

Fifty-two passengers were killed in train and train-service accidents last year, compared with 17 passenger fatalities in 1955.

These are preliminary figures from the ICC's Bureau of Transport Economics and Statistics, and are thus subject to revision. The bureau's compilation follows:

Item	Month of December 1956	1955	12 months ended with December 1956	1955
Number of train accidents*	817	824	9,452	8,716
Number of accidents resulting in casualties	51	68	536	517
Number of casualties, in train, train-service and non-train accidents:				
Trespassers:				
Killed	46	57	766	809
Injured	68	57	876	811
Passengers on trains:				
(a) In train accidents*				
Killed	2	..	45	4
Injured	72	17	1,034	417
(b)In train-service accidents				
Killed	1	2	7	13
Injured	138	213	1,668	1,794
Travelers not on trains:				
Killed	..	..	5	4
Injured	117	90	856	850
Employees on duty:				
Killed	26	29	246	252
Injured	1,562	1,739	18,880	18,322
All other nontrespassers:**				
Killed	181	204	1,425	1,585
Injured	550	743	5,295	5,638
Total—All classes of persons:				
Killed	256	292	2,494	2,667
Injured	2,507	2,859	28,609	27,832

*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of $375 or more to railway property. Only a minor part of the total accidents result in casualties to persons, as noted above.

**Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and nontrespassers*, were as follows:

Persons:				
Killed	171	189	1,337	1,446
Injured	414	607	3,760	4,014

Eligibility for NRAB Makes Union 'National'

A union must be eligible to elect labor representatives of the National Railroad Adjustment Board if it is to become available for "alternative membership" under the Railway Labor Act's union-shop provisions.

The United States Supreme Court has so ruled in *Pennsylvania v. Rychlik*, the case of a trainman who was discharged by the PRR under provisions of its union-shop agreement with the Brotherhood of Railroad Trainmen. Rychlik was a member of BRT but resigned and joined United Railroad Operating Crafts, believing it to be "national in scope" and thus available to him for an "alternative membership." On that basis, his resignation from the BRT would not have put him in violation of the union-shop agreement and hence subject to discharge.

When a system board of adjustment ruled against him, and his discharge followed, he took the case to court. The Supreme Court's ruling is that "Section 2, Eleventh (c) of the Act makes only such unions available for alternative membership under a union-shop contract . . . as have already qualified as electors for the labor members of the NRAB under Section 3, First." UROC had not so qualified.

New Dining Service Tried on Six NYC Trains

Passengers on six New York Central trains are now able to order at their seats complete hot meals prepared at a kitchen several hundred miles away. The new service, based on five years of research, adapts the principle of the vacuum bottle for liquids to keep solid foods piping hot. The program was developed by Mealpack Corporation in cooperation with several industrial firms. The service is available on the "Ohio Xplorer" between Cleveland and Cincinnati; the "DeWitt Clinton" between Buffalo and New York; "Easterner," Buffalo to Albany; "Ohio State Limited," New York to Buffalo; and the "Hendrick Hudson," and the "Upstate Special," both of which operate between New York and Albany.

Fruehauf Forecasts Doom of Box Car

"The railroad box car is on its way to the Smithsonian Institution," says Roy Fruehauf, president of the Fruehauf Trailer Company.

Mr. Fruehauf believes the time isn't far off when all the freight now carried by the nation's fleet of box cars will be moved instead by truck trailers moving on flat cars.

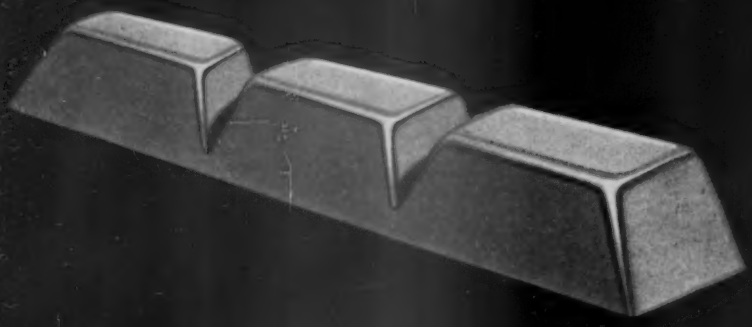
"Prospects are," he told the Cleveland Traffic Club last week, "that every Class I railroad will offer piggyback service within the next several years."

Piggyback is growing so fast, Mr. Fruehauf said, that figures about it are out of date before they are published. "Piggyback volume exploded into new high levels in 1956," he continued. "For the first eight months of last year the Southern Pacific's piggyback volume was up 24% over 1955; the Pennsylvania's increase was 40%; Lackawanna's 47%; Burlington's 60%; and the Wabash's 83%."

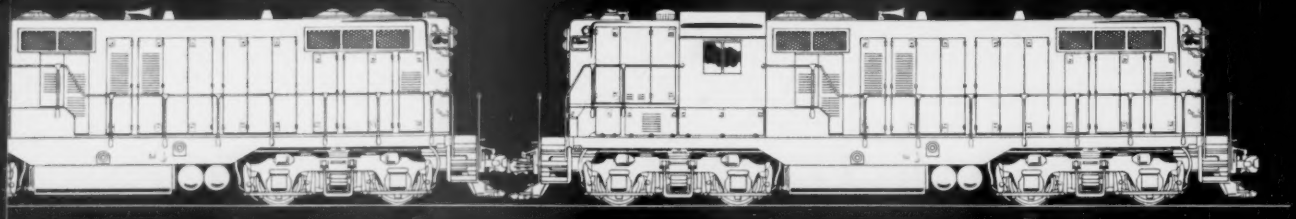
Mr. Fruehauf also said that fishyback—carrying loaded truck trailers and detachable chassis containers aboard ship—is growing fast. "With the coming of the St. Lawrence Seaway, fishyback traffic is going to be one of the dominant features on the Great Lakes. It is not often in history that a city—like Cleveland—over 500 miles from the ocean, finds

(Continued on page 27)

Forecast: Aluminum Consumption



1957



Will your present motive power

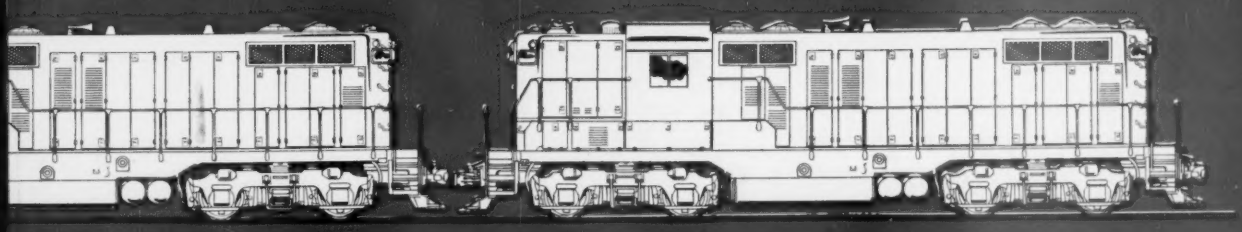
Now is the time to plan for increased traffic, not only for aluminum and aluminum products, but for steel, chemicals, foodstuffs and nearly all other basic products, most of which will exert comparable demands on rail transportation in the growth years ahead.

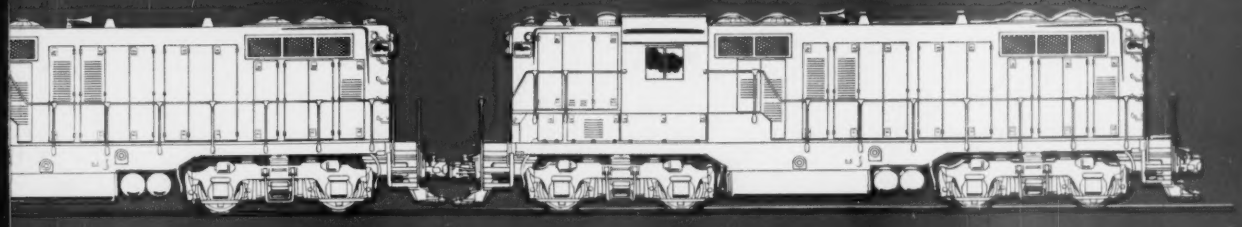
Electro-Motive is showing its faith in this growth potential through a forty-two per cent expansion of manufacturing facilities. We are now in a better position than ever to plan with you a realistic program of motive-power acquisition and modernization that will *give you power when you need it.*

Through a planned, step-by-step program you will be able to match power to growth conditions as they occur, thus avoid delays costly both in revenue and goodwill.

And Electro-Motive offers the opportunity of anticipating this increasing traffic

*to double by 1965**





. . . do the job?

* Aluminum producers expect the use of aluminum in such things as buildings, freight cars, automobiles, packages, cans and other new products will double consumption in the United States by 1965.

with fast, dependable, economical motive power—either from our constantly improving line of General Motors locomotives, or through our modernization facilities that make new locomotives from old.

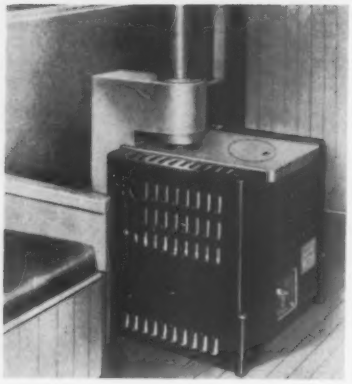
GENERAL MOTORS LOCOMOTIVES

ELECTRO-MOTIVE DIVISION
GENERAL MOTORS

La Grange, Illinois • Home of the Diesel locomotive
In Canada: General Motors Diesel, Ltd., London, Ontario

RAILWAY AGE
The Industry's Newsweekly

WHAT'S NEWS in Products



Caboose Heater

. . . works on varied fuels

The Vapor Caban Heater No. 55 has a special vaporizing burner using regular diesel locomotive fuel oil. It will also burn No. 1 fuel oil and kerosene. The fuel control is adjustable, giving a maximum output of 55,000 Btu per hour on ½ gal of fuel per hour.

The heater gives off both radiant and convected heat. Air from the floor flows through lower openings at sides and front, and is heated by passing over the outer surfaces of the firepot. It then flows out the upper openings. A special barometric draft control is at the back.

A cast-iron surface on top of the heater affords a cooking area. In the center of this surface is a small cast iron removable lid through which the heater can be lighted.

The heater is 30 in. high, 29 in. wide and 26½ in. deep, making it adaptable for use also in work cars, camp cars and small buildings. The approximate weight is 165 lb. *Vapor Heating Corporation, Dept. RA, 80 East Jackson blvd., Chicago 4* •

Safety Detergent

. . . works without water

Composition No. 117 is a solvent detergent designed to remove grease and oil where water cannot be used. It is said to be equally effective in cleaning electrical equipment, diesel cabs, and engine compartments. Flash point is 185 deg. The solvent has an exposure tolerance rating two and a half times greater than trichlorthylene and twenty times that of carbon tetrachloride. When used full strength, applied by brush, immersion, or a non-atomizing spray, parts may be blown dry with compressed air. The material may be diluted up to equal parts with high flash petroleum distillate, if necessary. *Oakite Products, Inc., Dept. RLC, 146 Rector st., New York 6* •

Sleeve-Type Journal Bearing

. . . successful in tests

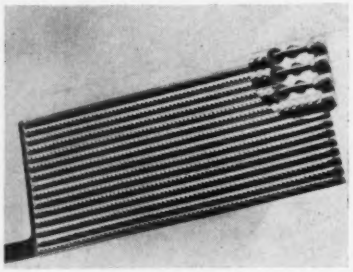
The Kar-Go a sealed sleeve-type axle bearing has been developed for freight cars. It consists of a hardened axle sleeve, an aluminum alloy bearing, and a felt wick lubricator assembly, all contained in a housing that fits into the standard journal box with minor alterations, or into narrow or wide-jawed pedestal-type truck side frames. Entrance of foreign material and loss of lubricating oil are said to be eliminated.

The bearings have been successfully tested by 10 American and

Canadian railroads on which they have now accumulated more than five million unit miles. Eighteen more roads are ready to start test programs. Pilot production is now under way to fill test orders.

It has an automotive-type oil seal of synthetic rubber. The unit holds only one pint of oil which, according to extensive tests, is enough to properly lubricate it. Spring-loaded felt wick lubricators are fixed at the bottom of the bearing unit and maintain positive contact with the journal sleeve.

The precision design and accurate control of the clearance are said to increase bearing load capacity and cooling. Bearings are available for journals from 5 by 9 in. to 6½ by 12 in. *Allison Division, General Motors Corporation, Dept. RA, Indianapolis* •



Battery Capacities

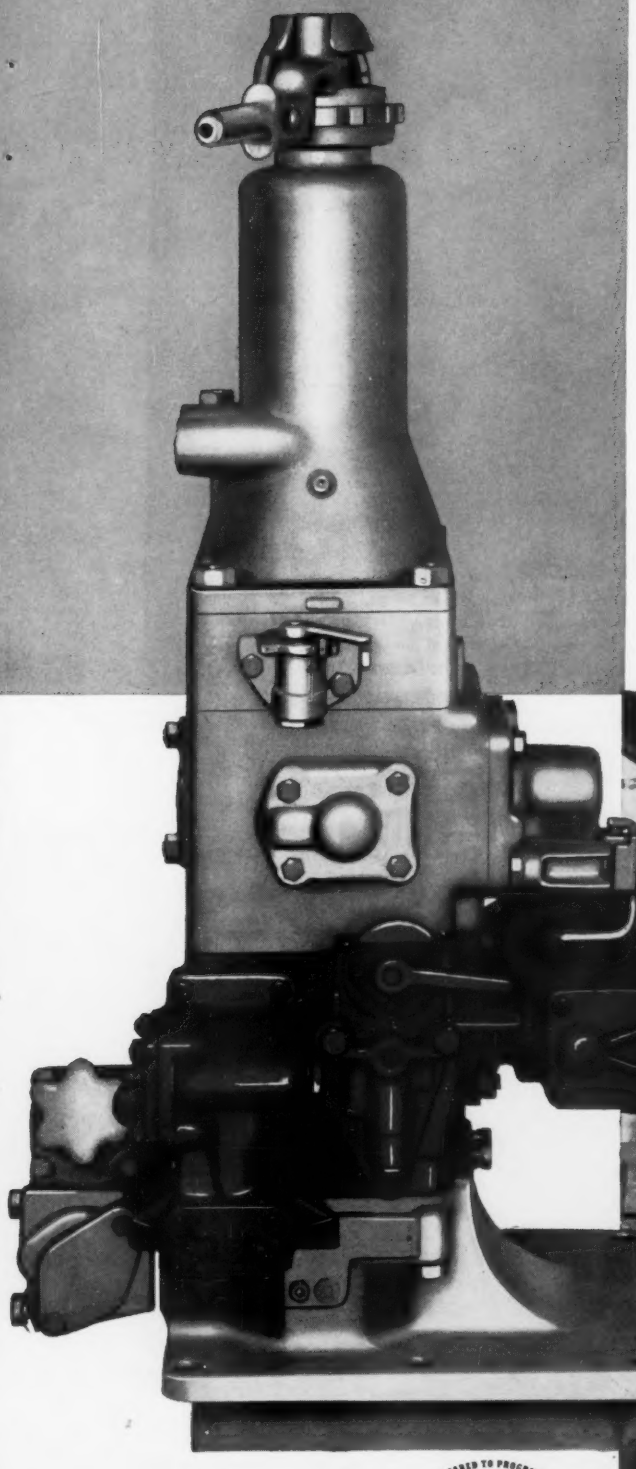
. . . increased 20 per cent

A new type of Exide-Ironclad positive plate for lead storage batteries has resulted in a battery of increased capacity in a given space. It will apparently also extend battery life. In the new positive plate, the slotted tubes which retain the active material in contact with the central Silvium grid spines are replaced with a new type of retainer. The new retainer consists of a perforated polyethylene tube inside of which there is a second tube of woven glass fiber. The two tubes allow for free passage of electrolyte and also retain active material firmly in place. The combined thickness of the plastic and woven glass tubes is less than that of the slotted tube and allows for an increase of active material in a tube having the same outside diameter. Also, since the material is better contained, it has been possible to reduce sediment space and increase plate length.

As a result, battery amp-hr capacity, at the 6-hr rate, has been increased 20 per cent, and watt-hr capacity 21 per cent without increasing the external battery dimensions. At the one-hr rate, watt-hr capacity has been increased 35 per cent. Conversely battery size may be reduced without reduction of capacity. Weight is up 6 per cent for batteries of equal size and 20 per cent more capacity.

Because of these characteristics, the battery is designated as a motive power battery Type TG Exide-Ironclad for the operation of industrial trucks. It has a rated capacity of 72 amp-hr per positive plate as compared with 50 amp-hr for the type TLM and 60 amp-hr for the TH type. *Exide Industrial Division, Electric Storage Battery Company, Dept. RA, Box 8109, Philadelphia 1* •

24RL–the road locomotive brake that can be kept modern



Sectional construction, as followed in the 24 RL Brake Valves, provides for the addition of new or improved functions merely by the substitution of sections. The advantage, of course, is that the brake equipment can be kept modern with minimum investment as compared to entire brake valve replacement.

The most recent improvement that can be provided in this manner is the brake pipe pressure maintaining feature, which offers pronounced improvement in train brake operation plus outstanding maintenance economies that develop from uniform distribution of braking pressure throughout the train.

This feature can be incorporated in any D-24 Type Brake Valve now in service by replacing the existing Filling Piece Portion with the Conversion Filling Piece shown in color in the illustration. Write for our Circular Notice No. 1130 which gives complete details.

Westinghouse Air Brake
COMPANY
AIR BRAKE DIVISION WILMERDING, PENNA.

GEARED TO PROGRESS
P R I
MEMBER

*New KEM KOLD BILD being applied on new cars at Berwick, Pa., plant of A C F Industries, one of several leading car builders using this new one-coat spray material.

Now two-coat protection with <u>one</u> cold-sprayed coat...stencil in 2 to 3 hours!

Eliminate time for drying and application of second coat . . . save material and out-of-service costs! One full coat of new KEM KOLD BILD has the build of two standard coats using conventional spray equipment. It dries in 1½ hours and is ready for stenciling in 2 to 3 hours.

KEM KOLD BILD produces a dry-film thickness as heavy as 2½ mils. Good film flow with a minimum of overspray. And KEM KOLD BILD dries to a bright gloss that stands up under repeated cleanings and tough service. Doesn't lift or affect primers. No pinholing or bubbling from entrapped solvents during or after application.

KEM KOLD BILD is being used by leading railroads and car builders now. Why not arrange for a demonstration by contacting The Sherwin-Williams Co., Transportation Sales Division, Cleveland 1, Ohio.

(In Canada: 2875 Centre Street, Montreal)

SW
COVER THE EARTH
®

SHERWIN-WILLIAMS RAILWAY FINISHES

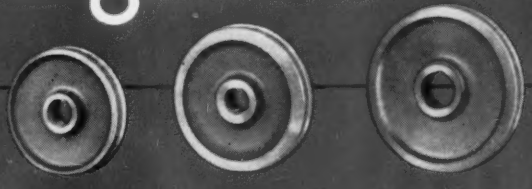
†Trade-Mark

who called the railroads a "monopoly"??

by Hungerford

We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.

Edgewater Rolled Steel Wheels

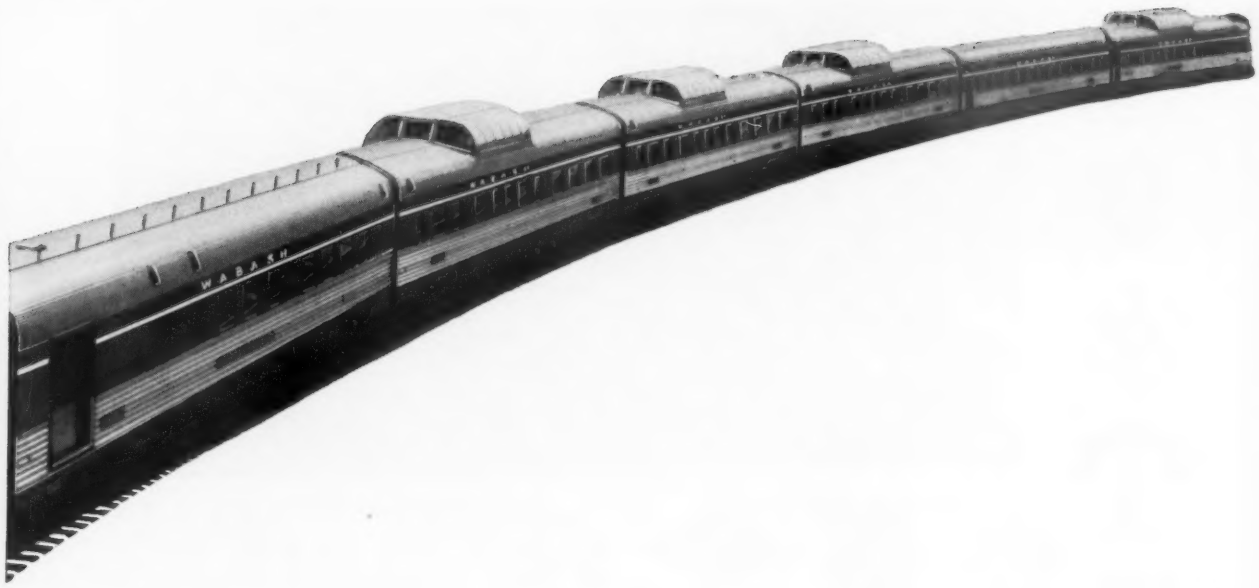


for Freight Cars Passenger Cars Diesel Locomotives

GEARED TO PROGRESS
RPI MEMBER

Edgewater Steel Company
PITTSBURGH 30, PA.

Reputation-Maker for the Wabash...



One of the nation's most famous trains, the Wabash streamliner "Blue Bird", ties Chicago to St. Louis with an enviable record of on-time service. Passengers have come to rely on the comfort and dependability of this fast blue beauty — much as the Wabash has come to rely on Sinclair for lubricating protection. Sinclair is proud to supply the pride of the Wabash with GASCON® Diesel Lubricating Oil... honored, too, that the record shows over 100 U. S. railroads specify this outstanding Diesel lubricating oil.

SINCLAIR RAILROAD LUBRICANTS

Sinclair Refining Company, Railway Sales, 600 Fifth Avenue, New York 20, N. Y. • Chicago • St. Louis • Houston

Lackawanna · RPR · The Southern Serves the South · Boston and Maine Railroad · Illinois Central Lines · Canadian Pacific · C&O Progress · Illinois Central · New York Central System · Atlantic Coast Line · Indiana Harbor Belt · Linking 13 Great States with the Nation B&O

Canadian National Railways · Nickel Rate Road · Reading Lines · NH · Lehigh Valley Railroad · The D&H Bridge Line from New England and Canada

SPENO

BALLAST CLEANING and RAIL GRINDING SERVICE

The exclusive SPENO Method of Ballast Cleaning and the SPENO Rail Grinding Train have proved themselves to be time, cost, and maintenance savers for our contractual clients.

You may contract for one or both of these services—secure that you have joined company with many other outstanding and forward looking railroads.

Write today for future availabilities of equipment.

Geared to Progress · RPI Member

Just Ask the Railroads That have used us!

FRANK SPENO RAILROAD BALLAST CLEANING CO., INC.
306 North Cayuga St., Ithaca, N. Y.

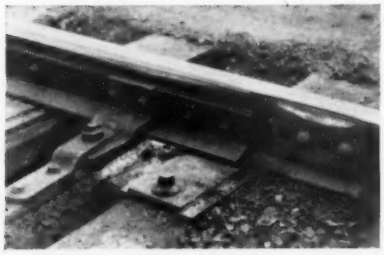
MECOLUBRICATION

The Majority of Railroads on the North American Continent

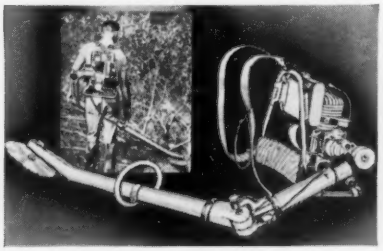
. . . use MecoLubrication. It has improved curve safety and operating economy increasingly ever since the first lubricator of this type was installed more than a quarter of a century ago. MecoLubrication is used ahead of curves carrying heavy loads and those with trains operating at high speeds. By greasing the high rail, MecoLubrication makes higher speeds safe and also lengthens curve rail and locomotive wheel flange life two to four times.

Maintenance Equipment Company
Division of Poor and Company
RAILWAY EXCHANGE BUILDING · CHICAGO 4, ILLINOIS

G-1314-R

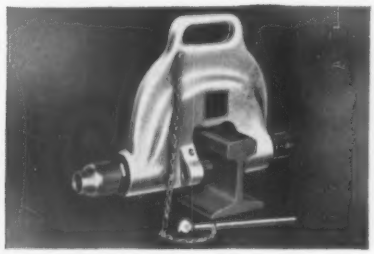


MACK REVERSIBLE SWITCH POINT PROTECTOR
Prolongs the life of switch points about 4 times; then is reversed and again extends the switch point life for another similar period.



BRUSH CUTTER
Cuts right-of-way maintenance costs. One operator with the new, light-weight, Southworth can do the work of eight men using brush hooks or scythes. Extreme maneuverability, "work horse" power, light-weight are important advantages.

MECO POWER RAIL LAYER
Reduces labor cost to a minimum in laying Standard Rails, Long Rails or Continuous Welded Rail. Operates efficiently with small gang.



VELOCITY POWER RAIL PUNCH
Takes only an instant to punch clean, smooth hole for track bolts. Needs no electricity, compressed air, hydraulic power; operates from small blank cartridge; no open flash or recoil. Only one major moving part, the piston.

MILE AFTER MILE OF SAFE SHIPPING...

with *Streamlite* HAIRINSUL

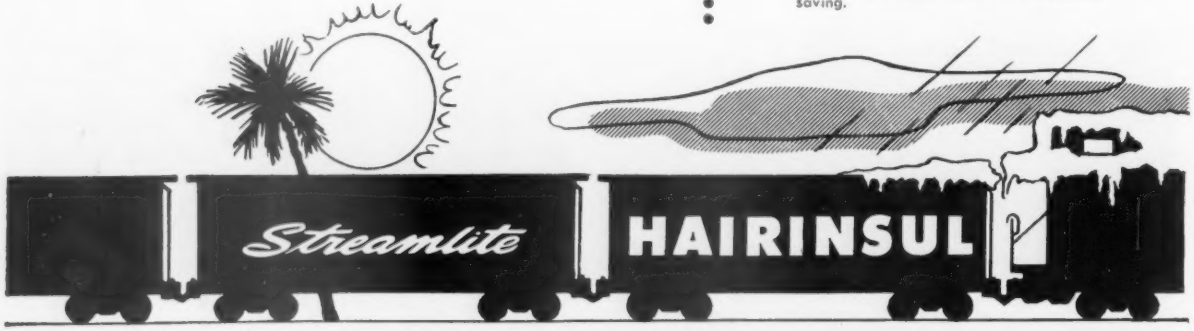
Car building engineers have long recognized that Streamlite HAIRINSUL is the most efficient insulation under all operating conditions. A half century of successful use is proof enough that service conditions never retard its high insulating efficiency.

Not only is Streamlite HAIRINSUL a one-time investment; it actually outlives the life of the car and can be salvaged in perfect condition for use in new cars.

AMERICAN HAIR & FELT COMPANY
Merchandise Mart • Chicago, Illinois

SIX MAJOR REASONS WHY LEADING REFRIGERATOR CAR LINES SPECIFY *Streamlite HAIRINSUL*

1. **LOW CONDUCTIVITY.** Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity—.25 btu per square foot, per hour, per degree F., per inch thick.
2. **LIGHT WEIGHT.** Advanced processing methods reduce weight of Streamlite Hairinsul by 40%.
3. **PERMANENT.** Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.
4. **EASY TO INSTALL.** Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.
5. **COMPLETE RANGE.** Streamlite Hairinsul is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other specified coverings are available.
6. **HIGH SALVAGE VALUE.** The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.



SETS THE STANDARD BY WHICH ALL OTHER REFRIGERATOR CAR INSULATIONS ARE JUDGED

(Continued from page 15)
itself becoming a world seaport. This will mean that Cleveland will not only become a foreign shipping center, but with trailerships it will become a great port for inter-American commerce. Trade between cities right here in the United States will be carried largely on the new roll-on, roll-off trailerships."

ICC Realigns Work, Creates New Bureau

The Interstate Commerce Commission has established a new Bureau of Operating Rights, and realigned its formal proceedings work. The changes effective March 25, were ordered to "expedite the flow of its work," the commission announcement said.

Under the reorganization, proceedings involving motor carrier operating rights will be transferred to the new bureau. They are now processed in the Section of Operating Rights, Bureau of Motor Carriers.

Formal proceedings relating to carrier rates, charges and practices will be processed in the Bureau of Formal Cases which will be renamed the Bureau of Rates and Practices. Formal proceedings relating to finance matters will be processed in the Bureau of Finance.

The latter will mean that formal motor carrier finance cases, including mergers, consolidations, and transfers of operating rights and properties under sections 5, 210a (b), and 212(b) will be transferred from the Bureau of Motor Carriers, thus centralizing all formal finance matters in one bureau.

The commission also announced the appointment of Paul Coyle, chief of the Section of Operating Rights, to be director of the new bureau. Bertram E. Stillwell, assistant chief of the section, will be assistant director. Irving J. Raley, chief of the section's finance review branch, will be transferred to the Bureau of Finance as assistant director and chief of the Section of Motor Carrier Finance.

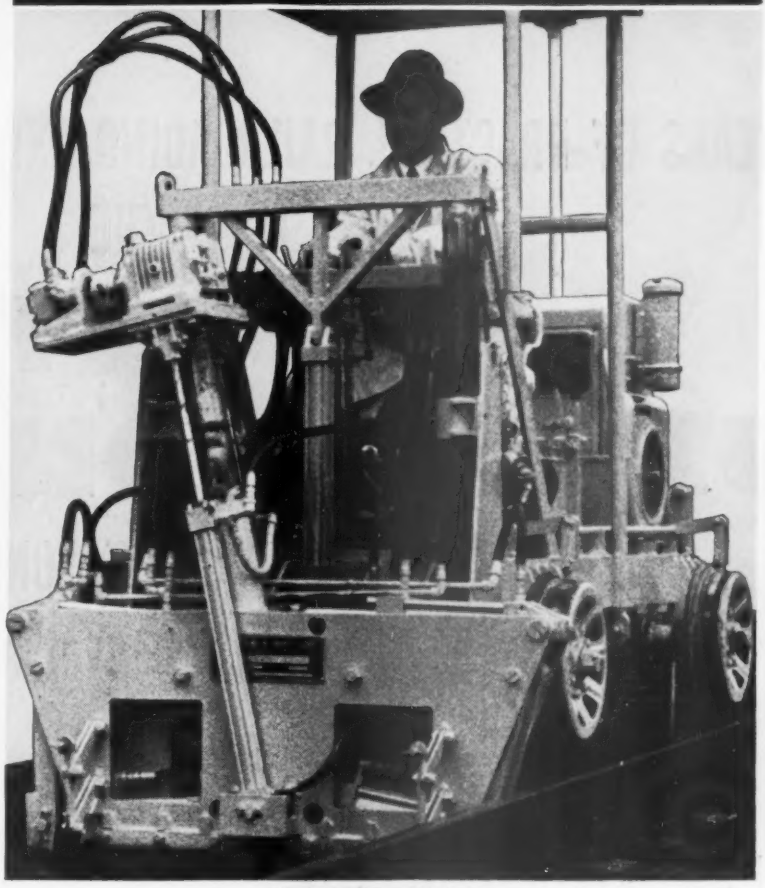
'Right-to-Work' Law Passes in Indiana

"Right - to - work" legislation approved recently by the Indiana general assembly may give rise to new law suits by railroad employees who prefer not to join unions.

A midwestern railway spokesman pointed out last week that such suits had already been fought in Nebraska and Texas. The Texas case is being appealed to the United States Supreme Court.

(Continued on page 30)

Lines 1000 to 2000 Feet of Track per Hour!



R·M·C·

WHEEL-MOUNTED LINE Master

Using only an operator and one man for sighting, LineMaster provides outstanding maintenance economies. With lining head anchored to roadbed by a power-driven spud inserted in the crib, hydraulic cylinders under precise control of the operator move track in either direction. Available in wheel-mounted and crawler-mounted types.

Railway Maintenance Corporation

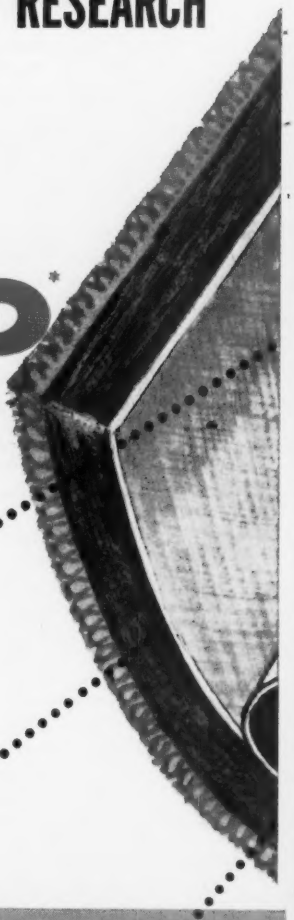
BOX 1888, PITTSBURGH 30, PA.

40 YEARS OF PRACTICAL RAILROADING EXPERIENCE AND RESEARCH MADE THE

ESPEY LUBRICATION PAD*

*PATENTS PENDING

THE MOST EFFICIENT, LONG-LIVED LUBRICATION PAD AVAILABLE...



No other pad offers these features

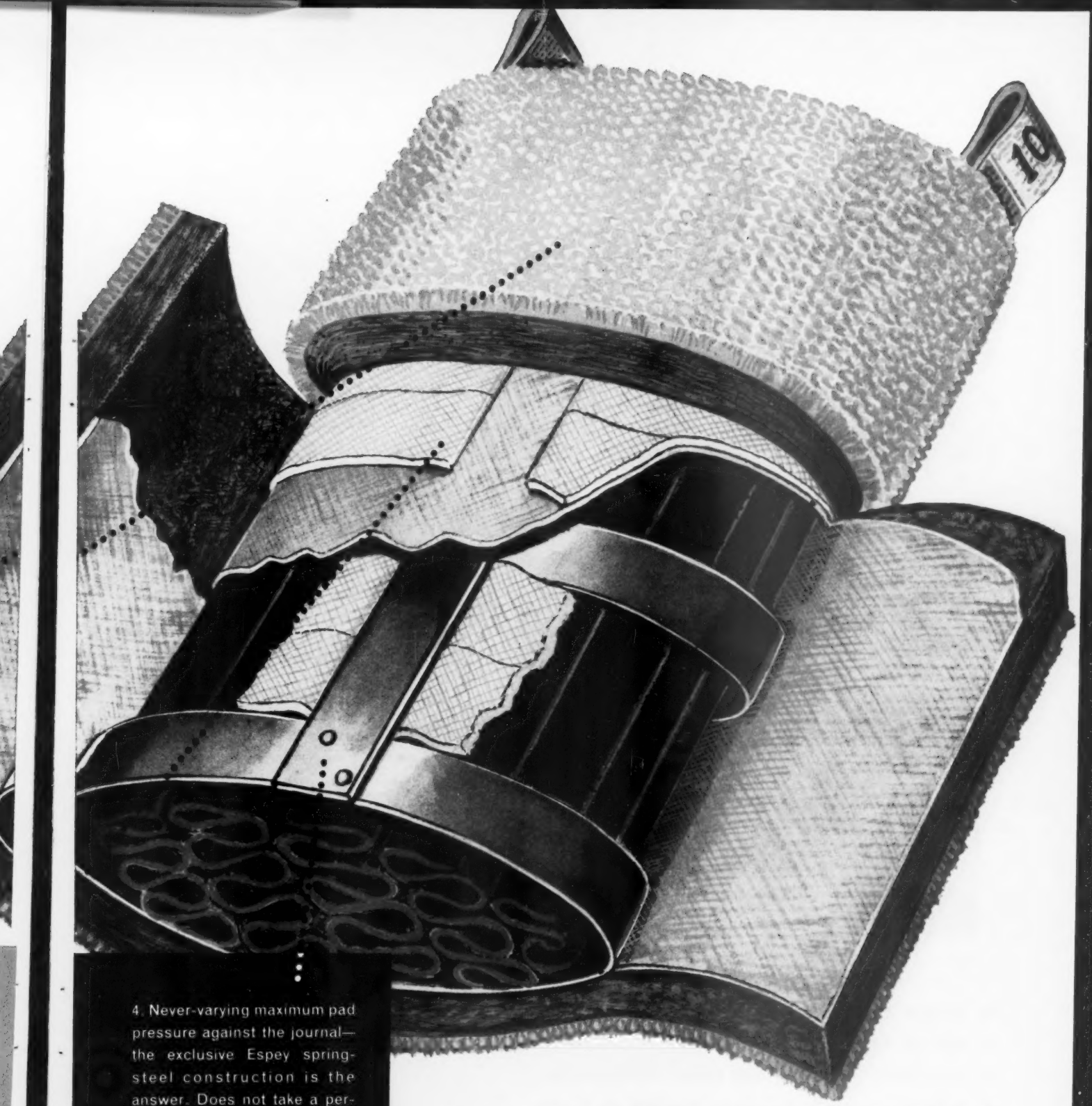
Each one an absolute necessity for effective, constant journal lubrication!

1. The outside covering practically refuses to "wear out"—it's a specially designed Espey pad feature that "hungers" for oil and generously "feeds" it to the journal for the most positive protection at all times.

2. Maintains its oil transmitting properties for the long, long life of the Espey pad. The specially treated felt won't deteriorate.

3. A "flood" of oil from the box to the journal for complete, continuous lubrication—Espey's sturdy large-sized wicks feed an abundance of oil.

SPRING PACKING



4. Never-varying maximum pad pressure against the journal—the exclusive Espey spring-steel construction is the answer. Does not take a permanent "set".

It's a *fact* . . . the Espey pad will wear longer and wick more oil than *any* other pad—and for good reason. You can't beat 40 years of Spring Packing journal box lubrication experience—40 years of quality and service. Remember? . . . the first big improvement in journal box lubrication, in 1936, when Spring Packing developed Hold-Rite retainers to hold packing and prevent waste grab. Now in 1957, these years of practical cooperative railroading experience resulted in the Espey Pad—designed by Espey engineers; made in the new Espey plant.

CORPORATION 332 South Michigan Avenue, Chicago, Illinois.
Espey Lubrication Pad Plant at Hammond, Indiana

(Continued from page 27)

The Indiana bill follows the pattern of legislation already enacted in 17 other states. In effect, it outlaws union-shop contracts. In the field of railroad employment, the statute apparently would conflict with Section 211 of the Railway Labor Act, which permits the union shop even though state law may prohibit it.

The Supreme Court has ruled that federal law controls in cases like these. The pending Texas appeal challenges the ruling.

After legislative approval of the Indiana bill, an estimated 10,000 union members marched on the statehouse in Indianapolis with placards urging a gubernatorial veto. Gov. Handley has said he will allow the bill to become law without his signature.

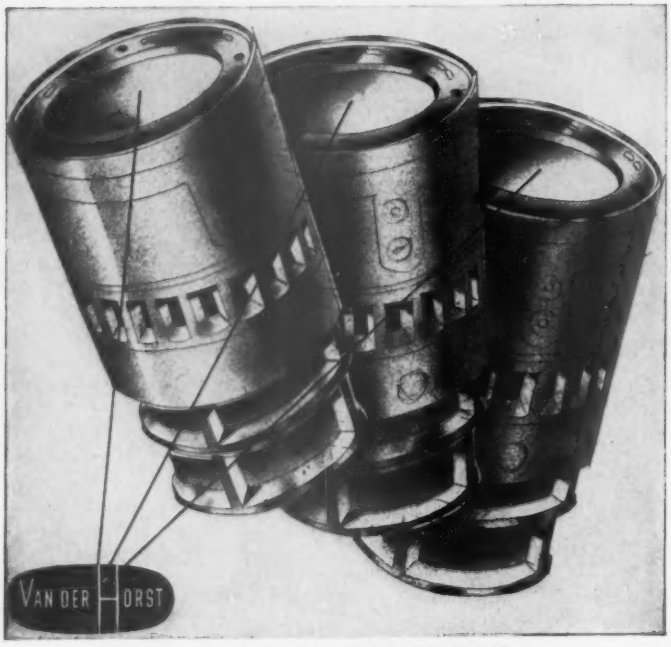
Variety in Fares

Basic coach fares are now 3.7212 cents per mile in Eastern territory, 3.0318 cents in Southern territory and some parts of Western territory, and 2.7563 cents in other parts of the West. First-class fares, respectively, are 4.9613 cents, 4.2446 cents, and 3.8588 cents.

These rates reflect increases made effective since the first of this year. They were included by the ICC's Bureau of Transport Economics and Statistics in a compilation showing changes in basic passenger fares since June 1918.

Coach and first-class rates were then on the uniform basis of three cents per mile. Coach fares subsequently got as low as 1.5 cents in the South and two cents in the East and West. The trend has been upward since 1942.

5 *big advantages of*



PORUS - KROME

Good for the Life of your Engines

- INCREASES CYLINDER LIFE 3 TO 5 TIMES.
- INCREASES PISTON RING LIFE UP TO 50%.
- ELIMINATES STOCKING OF OVERSIZED PISTONS AND PISTON RINGS.
- DEFINITELY CONTRIBUTES TO REDUCED DOWNTIME FOR ENGINES.
- DEFINITELY CONTRIBUTES TO A REDUCTION IN LUBE OIL CONSUMPTION.

—Write Dept. G, VAN DER HORST CORP., OLEAN, N. Y.—

OLEAN, NEW YORK
CHICAGO, ILLINOIS
HILVERSUM, HOLLAND

VAN DER HORST

TERRELL, TEXAS
LOS ANGELES, CALIFORNIA*

*Spartan Engineering

Financial

Dividends Declared

AKRON, CANTON & YOUNGSTOWN.—50¢, semiannual, payable April 1 to holders of record March 15.

CHICAGO SOUTH SHORE & SOUTH BEND.—15¢, quarterly, payable March 15 to holders of record March 5.

DELAWARE & HUDSON.—50¢, payable March 28 to holders of record March 11.

DENVER & RIO GRANDE WESTERN.—62½¢, payable March 18 to holders of record March 8.

ERIE.—37½¢, quarterly, payable March 31 to holders of record March 8.

READING.—4% non-cumulative 1st preferred, 50c, quarterly, payable March 14 to holders of record February 21; 4% 2nd preferred, 50¢, quarterly, payable April 11 to holders of record March 21.

RUTLAND & WHITEHALL.—95¢, paid February 15 to holders of record February 1.

ST. LOUIS-SAN FRANCISCO.—common, 37½¢, reduced, payable March 15 to holders of record March 1; $5 preferred, $1.25, quarterly, payable March 15, June 17, September 17 and December 16, to holders of record March 1, June 3, September 3 and December 2.

ST. LOUIS SOUTHWESTERN.—5% non-cumulative preferred, $5, annual, paid March 8 to holders of record March 1.

SOUTHERN.—5% preferred, 25¢, quarterly, payable March 15, June 14 and September 13 to holders of record February 15, May 15 and August 15, respectively.

SOUTHERN PACIFIC.—75¢, quarterly, payable March 25 to holders of record March 4.

UNION PACIFIC.—common, 30¢, quarterly; 4% preferred, 20¢, semiannual, both payable April 1 to holders of record March 11.

VICKSBURG, SHREVEPORT & PACIFIC.—common, $2.50, semiannual; 5% preferred, $2.50, semiannual, both payable April 1 to holders of record March 6.

WABASH.—common $2.50, paid March 8 to holders of record March 1.

Supply Trade

Harry Lock has been appointed a sales representative for the **Miller Lubricator Company** with headquarters at 3908 Scadlock Lane, Sherman Oaks, California (Los Angeles).

George H. Snyder resigned March 1 as president of **Trans-Temp Corporation** of Chicago.

J. A. Duncan, who retired January 1 as engineer inspection and tests of the New York Central, has become associated with

the **Walton R. Collins Company,** railway supplies, New York.

OBITUARY

William L. Thomas, 59, senior sales engineer for the Railroad Loading Division, Evans Products Company, died February 11.

Alexander D. Kline, 72, retired railway specialist for International General Electric, died in Sao Paulo, Brazil, December 22. Since his retirement in 1952 he has been a consultant on railway projects in South America.

Harold D. Skyrm, 59, a vice-president and director of General American Transportation Corporation, died February 24.

Organizations

Allegheny Regional Advisory Board.—The 76th regular meeting will be held in the Penn-Sheraton Hotel, Pittsburgh, March 19-20. Virgil D. Cover, professor of transportation, Syracuse University, will address a luncheon on the 20th.

American Council of Railroad Women.—Dates of the spring meeting, to be held in the Jayhawk Hotel, Topeka, Kan., have been changed from March 23-24 to March 16-17.

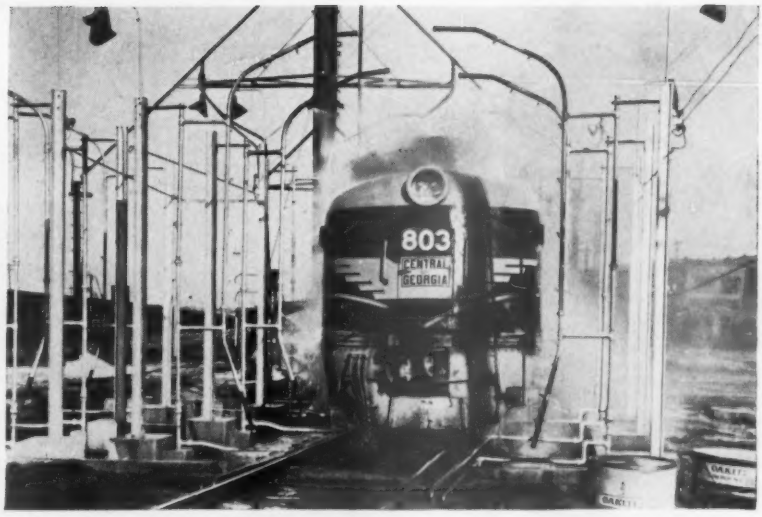
Association of Manufacturers of Chilled Car Wheels.—Members of this group, at their recent annual meeting, voted to change the name of the organization to Railway Wheel Association. Officers of the association are Clifford M. Stoner, president, and Raymond Wellington, secretary.

Ohio Valley Transportation Advisory Board.—Will meet at the Neil House, Columbus, Ohio, March 12-13. Maj. Gen. E. C. R. Lasher, executive director, Military Traffic Management Agency, will be guest speaker.

Pacific Coast Shippers Advisory Board.—The 102nd regular and 33rd annual meeting will be held in the Sheraton-Palace Hotel, San Francisco, March 21-22. Luncheon speaker on the 22nd will be Harold F. Hammond, executive vice-president, Transportation Association of America; subject, "Shippers Hold Four Aces."

Pacific Railway Club.—The 40th annual meeting and banquet will be held March 21 at the Sheraton-Palace Hotel, San Francisco, with Holcombe Parkes, president, Railway Progress Institute, as speaker.

Railway Fuel and Traveling Engineers' Association.—This group, as the result of a letter ballot of its membership, has changed its name to Railway Fuel and Operating Officers Association. Next annual meeting will be in the Hotel Sherman, Chicago, September 16-18.



In CAR WASHING, too

Oakite gives you

low-cost end results

WHY MAKE A CHOICE between *optimum* results and *economy* in car washing? With Oakite, you get both. To cite a case:

Unlike the material it replaced in an automatic car washer, Oakite Compound No. 88 thoroughly cut loose all grime, grease and road soil for easy rinse-away without streaking sides and windows. But the real pay-off was in material consumption. By using the more dilute, yet more effective Oakite solution, this railroad saved over $2600 in the space of a month.

That's why so many Class 1 roads consider Oakite materials as the standard for maintenance cleaning jobs of all types. It's a matter of *better* cleaning at *lower* cost.

56-page booklet tells you "How to make sure of the best in railroad cleaning" by taking full advantage of modern materials, methods and equipment. Write Oakite Products, Inc., 46 Rector St., New York 6, N.Y.

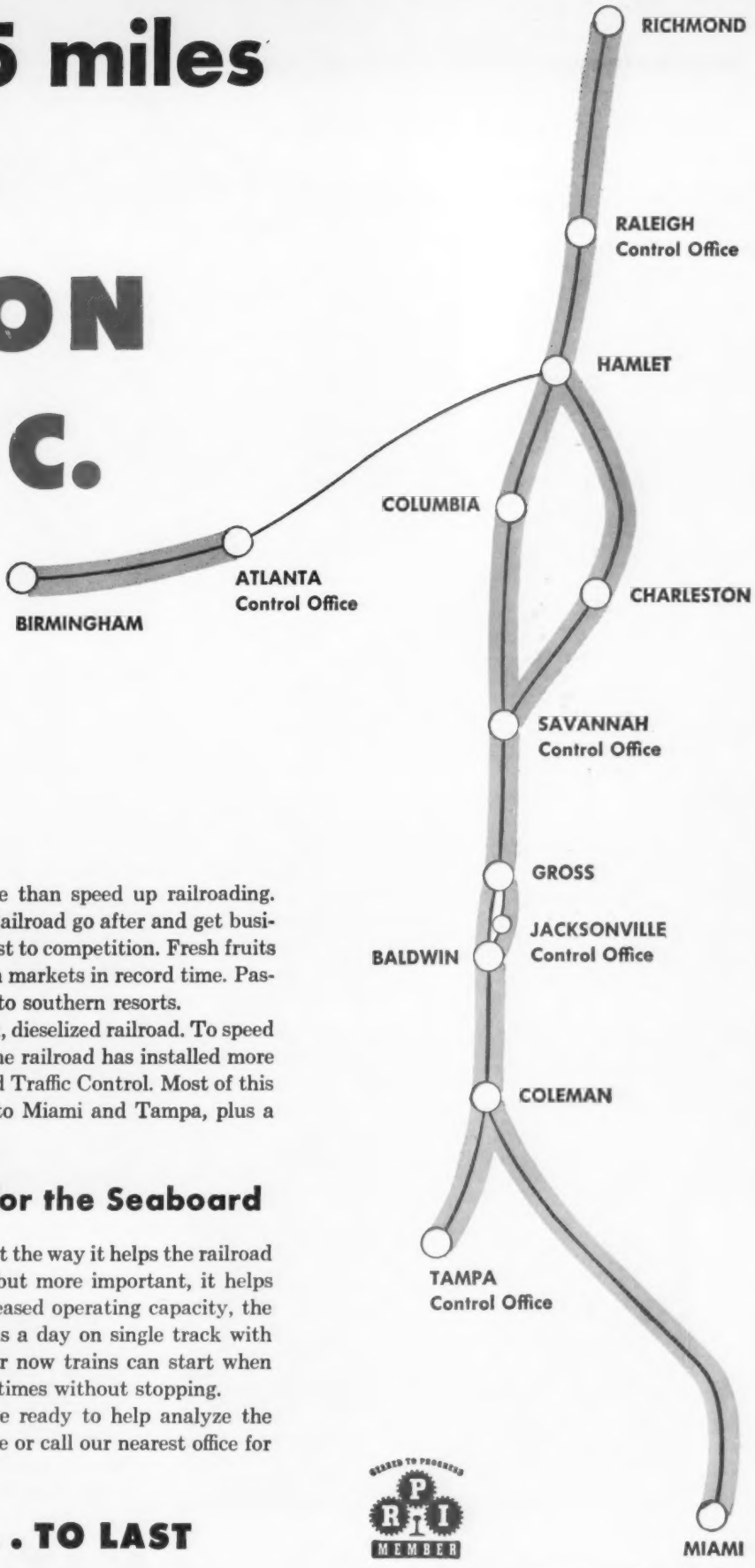
SPECIALIZED INDUSTRIAL CLEANING
OAKITE®
MATERIALS · METHODS · SERVICE
SCIENCE
Export Division Cable Address: Oakite

RAILROAD DIVISION

Seaboard wins business

1565 MILES OF RAILROAD are controlled by UNION C.T.C. from five locations at Raleigh, Savannah, Jacksonville, Tampa, and Atlanta. The office at Savannah, where this machine is located, controls 677.7 miles of territory.

with 1565 miles of UNION C.T.C.



MAP OF PART of Seaboard Air Line Railroad with C.T.C. territory shown in red.

Centralized Traffic Control does more than speed up railroading. It has helped the Seaboard Air Line Railroad go after and get business that might otherwise have been lost to competition. Fresh fruits and vegetables are shipped to northern markets in record time. Passengers get a quick, comfortable ride to southern resorts.

Seaboard is essentially a single-track, dieselized railroad. To speed up traffic and eliminate bottlenecks, the railroad has installed more than 1565 miles of UNION Centralized Traffic Control. Most of this is on the main lines from Richmond to Miami and Tampa, plus a stretch from Atlanta to Birmingham.

What C.T.C. is doing for the Seaboard

Seaboard officials are enthusiastic about the way it helps the railroad do a better job. It saves money . . . but more important, it helps make more money. And with the increased operating capacity, the railroad has run as many as 113 trains a day on single track with C.T.C. There are fewer delays too, for now trains can start when ready and make close meets . . . oftentimes without stopping.

UNION traffic control engineers are ready to help analyze the traffic problems for your railroad. Write or call our nearest office for the complete story.

Quality First . . . TO LAST

UNION SWITCH & SIGNAL
DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY
SWISSVALE, PENNSYLVANIA

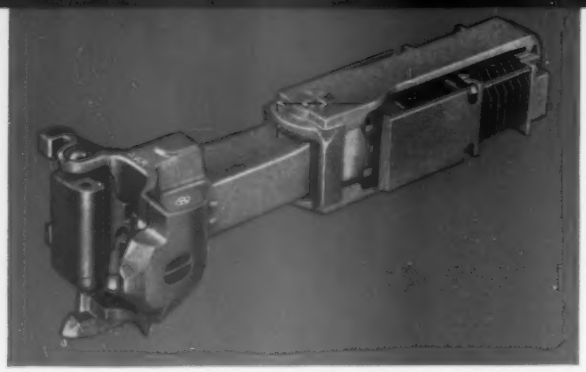
NEW YORK.....CHICAGO.....PITTSBURGH.....ST. LOUIS.....SAN FRANCISCO

SIGNED TO PROGRESS
P R I
MEMBER

There's Improved Railroading with National Specialties

Reason:

NATIONAL PROTECTION



Draw Gear Assembly

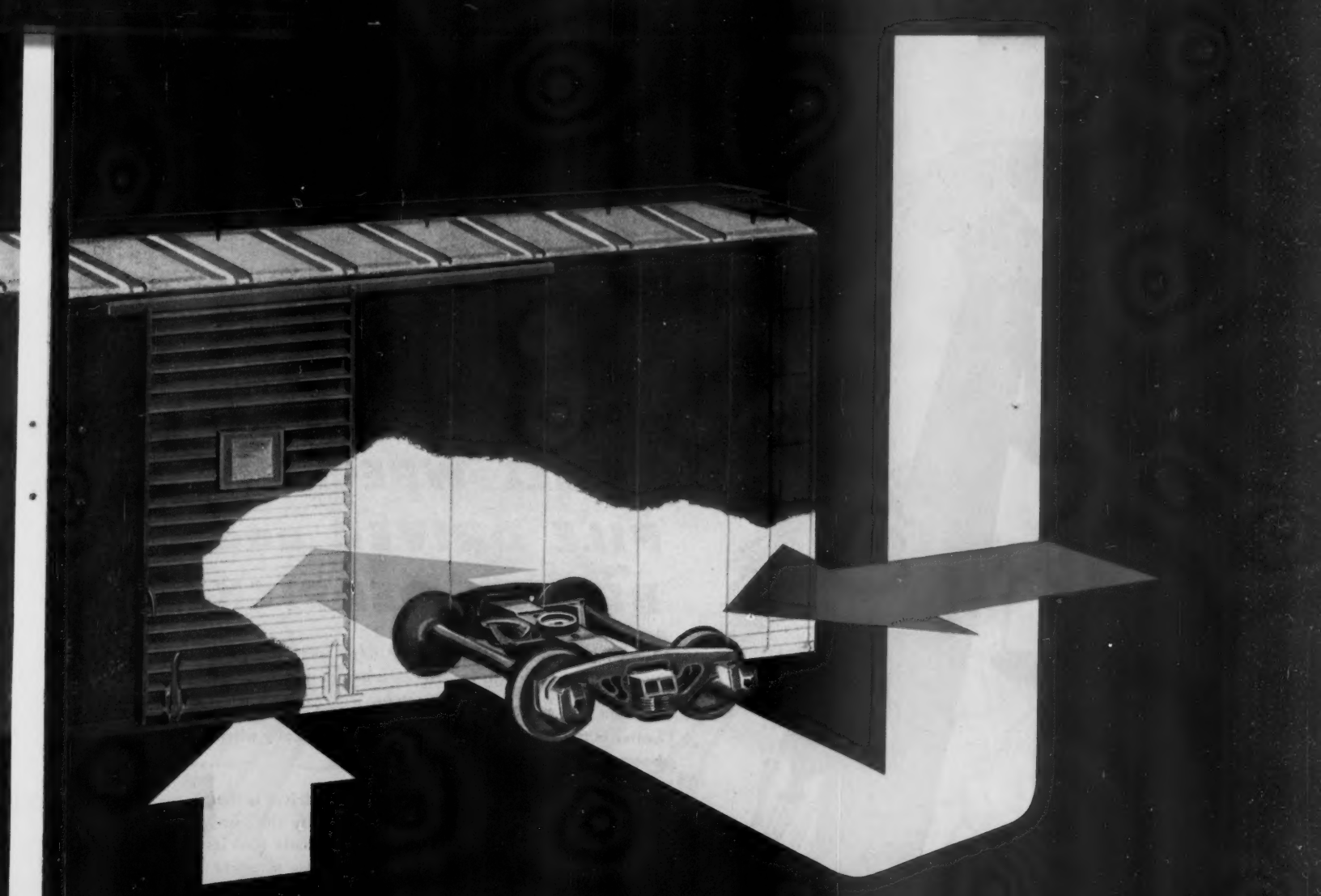
Reduce costly maintenance of cars by using National MF-400-1 Rubber-Cushioned Draft Gears, with National Type F Interlocking Couplers and National Y-45 Yokes. This combination makes a perfect shock control team to effectively cushion end-to-end impacts.

GEARED TO PROGRESS
P R I
MEMBER

NATIONAL MALLEABLE and STEEL

Railway Division Headquarters
Cleveland 6, Ohio

COUPLERS • YOKES • DRAFT GEARS • FREIGHT TRUCKS
SNUBBER PACKAGES • JOURNAL BOXES

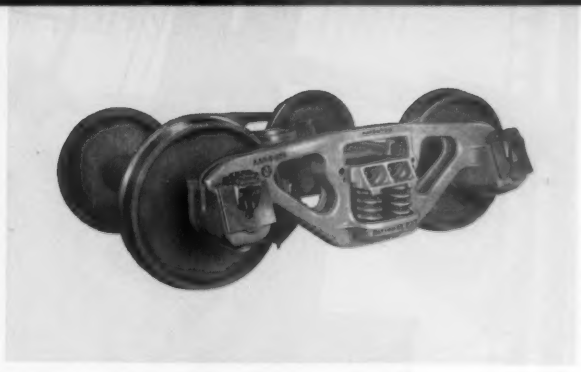


FROM EVERY DIRECTION *reduces maintenance*

National C-1 Truck

With built-in friction control devices, C-1 trucks provide positive *lateral* control and protection against *vertical* shocks for a smoother ride that reduces damage to rolling stock, lading and roadbed.

AA-4488



CASTINGS COMPANY

International Division Headquarters
Cleveland 6, Ohio

Canadian Subsidiary • National Malleable & Steel Castings Company of Canada, Ltd. • Toronto 1, Ontario

Established in 1868

ORTON®

Torque-Control

multiple purpose DIESEL WRECKER, PILE DRIVER and BRIDGE DERRICK

The ORTON combination has a straight wrecker boom which is long enough for use as a bridge derrick.

Pendent pile driver leads are furnished, permitting batter in both directions. Leads fold automatically when boom is lowered.

The 160-ton combination wrecker and pile driver is the ideal machine for roads which cannot justify the purchase of a single purpose unit. Larger roads find it more economical to use the single purpose wrecker for main line use; however, the combination big-hook and pile driver is just the answer for branch line use.

This unit is never idle — when it's not on emergency use, it is a work-horse for yard or B&B use. It can also be used as a bridge derrick with its 50-ton whip fall block.

SEND FOR BULLETIN #89

ORTON CRANE AND SHOVEL CO.

608 S. DEARBORN ST., CHICAGO 5, ILL.

"This refers to yours of the 10th..."

Some people still hammer out communications one character at a time.

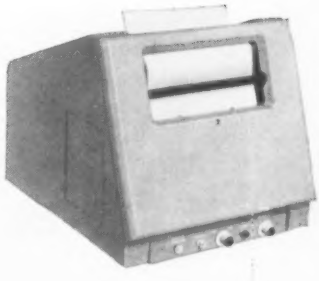
Others use DATAFAX—the fast Stewart-Warner electronic way to transmit all data over standard telephone lines.

Datafax transmits and records any material: correspondence, switch lists, wheel reports, drawings, pictures, printed matter, even handwritten notes. And since copies are exact duplicate images of the original, chance for error is completely eliminated.

Cost?

Automatic transmission and recording eliminate need for full-time operator; recorders will even respond to transmissions sent after the office is closed for the day. Datafax also eliminates retyping, proofreading, intermediate handling, intransit delays—and their clerical costs. The clear, smudge-proof, permanent Datafax copy costs less than 2¢ for a letter-sized unit, plus pro rata line charge.

Chances are your car service, stores, accounting, and all divisional operations have outgrown Stone Age Communications. If so, you'll want to find out about Datafax. First, send for your copy of the free Datafax bulletin. Write: Stewart-Warner Electronics, Dept. 31, 1300 No. Kostner Ave., Chicago 51, Illinois, or Current Controls Corporation, 542 N. Dearborn St., Chicago 10, Illinois.

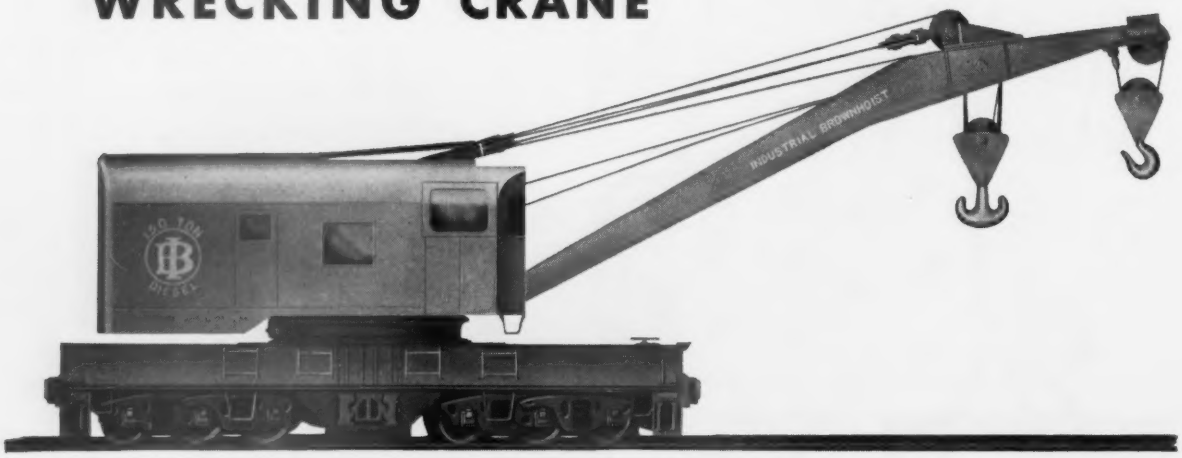


STEWART SW WARNER **ELECTRONICS**

a Division of Stewart-Warner Corporation

NOW AVAILABLE . . .

NEW BROWNHOIST 150 TON DIESEL WRECKING CRANE



INDUSTRIAL BROWNHOIST'S LATEST . . . 150 TON WRECKER DESIGNED FOR REDUCED AXLE LOADINGS

A smaller version of our famous 250 Ton Diesel Wrecking Crane, the new Brownhoist 150 Ton Diesel Wrecking Crane has been engineered to meet rail, bridge, and trestle conditions where a lighter axle load is necessary. With its up-to-date construction, this powerful twelve-wheel Diesel Crane can better perform the railroad services which have up to now been handled by obsolete, inefficient, steam powered cranes with high operating costs. The car is of welded and riveted structural sections with alloy-steel car-side sills, and travels on two six-wheel equalized steel side frame trucks. A quick disengaging mechanism is provided for train travel. The Diesel engine is equipped with torque convertor.

All clutches are air operated including friction reverse clutches. Boom hoist and rotating mechanism are worm-gear driven. The curved wrecking boom is of welded construction with alloy steel members; both main and auxiliary hoist sheaves are equipped with roller bearings; and the auxiliary hoist has a swivel sheave. The operator's position is in the front right hand corner of the cab and the crane controls are arranged for greater efficiency and convenience. The rugged new 150 Ton Diesel Wrecking Crane embodies the principles of design and construction that distinguish all Brownhoist Cranes . . . assuring you of maximum service with minimum maintenance. Write for complete information.

187

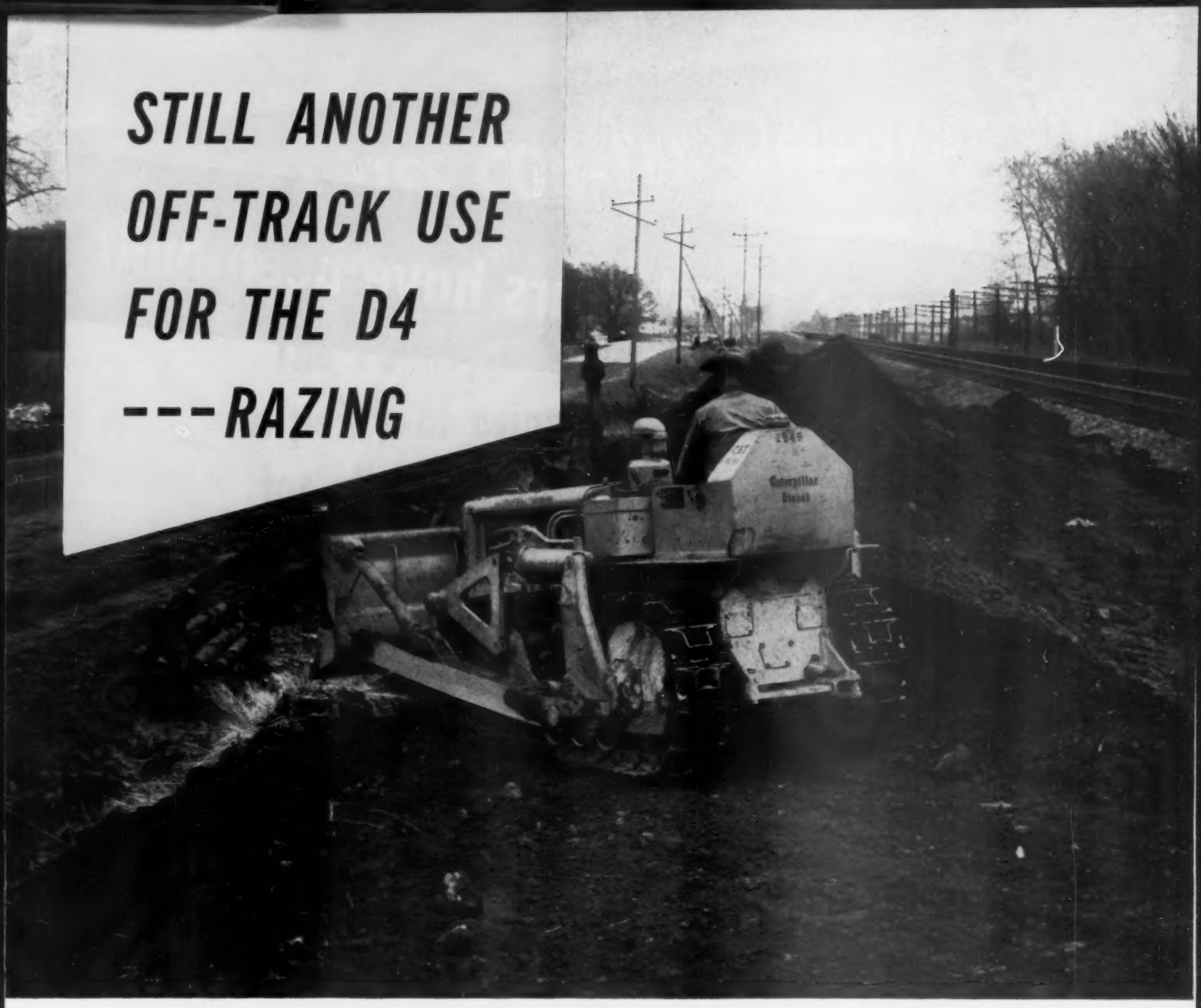
BROWNHOIST

BROWNHOIST MATERIALS HANDLING EQUIPMENT GIVES A LIFT TO AMERICAN INDUSTRY

SUBSIDIARY OF Penn-Texas

INDUSTRIAL BROWNHOIST CORPORATION
BAY CITY, MICHIGAN • DISTRICT OFFICES: New York, Philadelphia, Cleveland, Chicago, San Francisco, Montreal
AGENCIES: Detroit, Birmingham, Houston

STILL ANOTHER OFF-TRACK USE FOR THE D4 ---RAZING



Railroad men generally think of the many *construction* jobs a CAT* D4 Tractor can do. But here the off-track unit proves it can tear down as well as build. Working with a shovel, the D4, owned by John Dehner, Inc., Fort Wayne, razed an old pumping station near Hanna, Indiana, quickly and neatly. The job included digging out some 20,000 feet of water pipe.

Tomorrow this hard-working machine may be widening cuts, filling or ditching; building bank or widening shoulders. In the winter, it removes snow. The D4 can be used with a bulldozer, a No. 40 Scraper, or with many other attachments.

Equipped with a No. 4S Bulldozer, it will handle 184 loose yards per hour on a 50-foot haul. And you can increase this by 75% during downhill 'dozing and trenching.

Using a No. 40 Scraper, it can haul 4.5 cubic yards heaped. This tractor-scraper unit is designed to self-load efficiently even in confined areas. For the D4 gives you full power on turns. When one steering clutch is released, full power is transmitted to the other track. In that way maximum power is available for pulling heavy loads on turns.

And the D4 is built to take it. For instance, it now can be ordered with the exclusive Caterpillar oil clutch. That means clutch adjustments are rarely required. You get increased dependability and reduced service and maintenance costs.

For rugged, versatile off-track equipment, see your Caterpillar Dealer today. He'll show you—on your own job—how you can increase production and lower costs.

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

CATERPILLAR*

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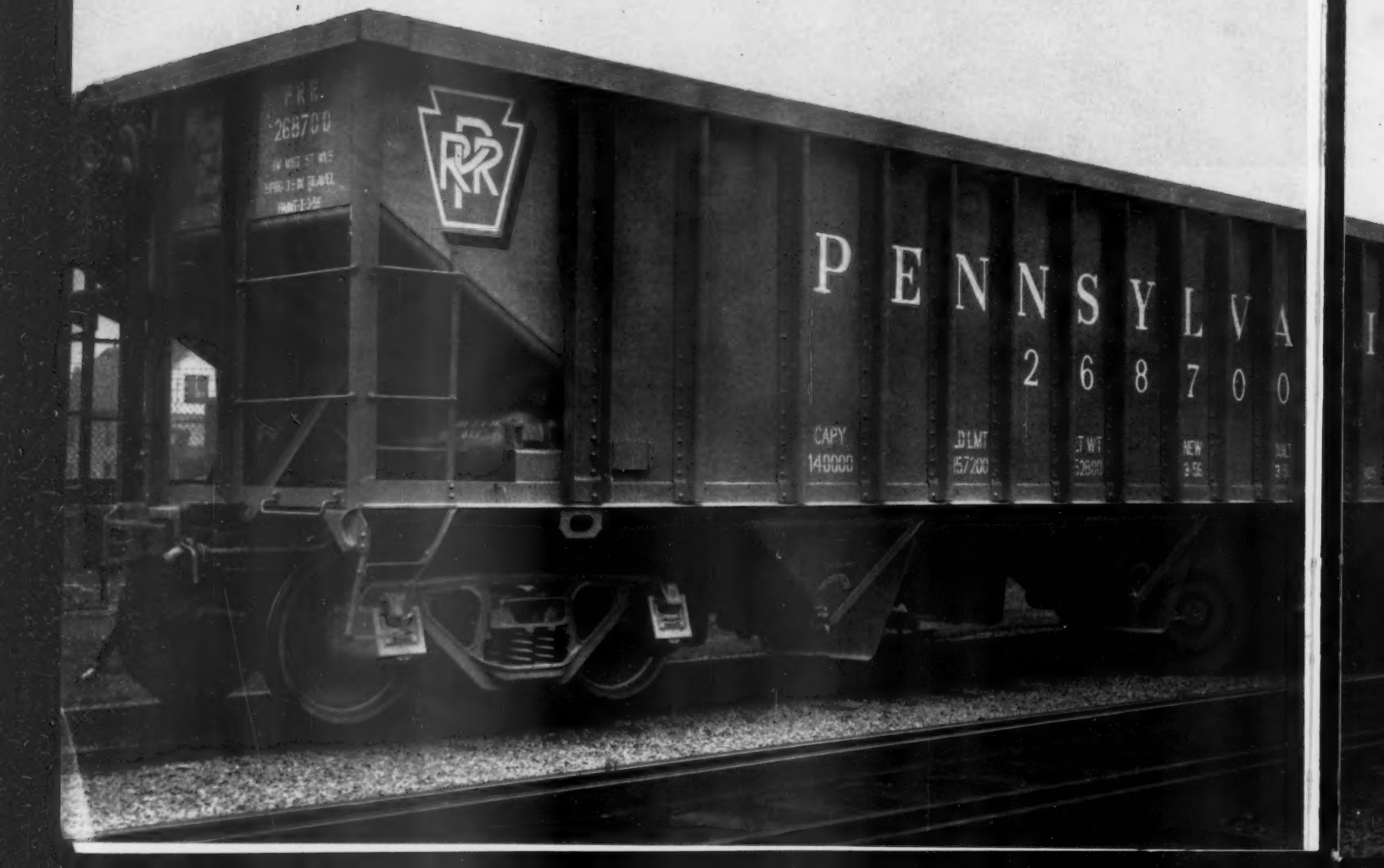
NAME THE DATE... YOUR DEALER WILL DEMONSTRATE

A Message to Management . . .

225,000 freight cars have been built

Planned for long life and low maintenance

800 70-ton hopper cars like this, built with USS COR-TEN high-strength steel, have been delivered, within the past year, to the Pennsylvania Railroad by American Car & Foundry Division of ACF Industries, Inc. These cars were built to PRR's new design, which not only incorporates the best features of existing hopper car design but goes well beyond this to provide a car that will offer exceptional resistance to the destructive mechanical forces to which hopper cars are subjected today. (The Pennsylvania has in service an additional 300 covered-hopper cars and 2,600 box cars in which USS COR-TEN Steel was used.)



better with USS COR-TEN steel since 1933

The Pennsylvania Railroad has now adopted a policy of using high-strength low-alloy steel for all body sheets in contact with the lading in their hopper car fleet

This important decision is part and parcel of a broadly conceived program "*to establish the Pennsylvania as the pace setter in the revitalization of the railroad industry.*"

By standardizing on the use of high-strength low-alloy steel for its hopper car fleet, the Pennsylvania confidently expects to obtain three important economic benefits:—(1) longer car life, (2) lower maintenance costs and (3) greater equipment availability.

The experience of railroads, operating hopper cars built with USS COR-TEN Steel, has proved that the use of COR-TEN Steel will prolong the life of sheets in contact with the lading by 50% or more—will sharply reduce maintenance costs by making necessary only one heavy repair instead of two during the life of the car—and, in addition, will cut out-of-service time in half.

In these applications, the elimination of one heavy repair results in a saving in maintenance cost alone that amounts to from 3 to 6 times the extra first cost of COR-TEN Steel construction.

To these savings can be added the extra earning power for the equipment, due to the fact that it has to be withdrawn from service only once instead of twice for heavy repairs. How much this amounts to in added revenue varies on different roads, but it runs into important money when you consider that many cars often spend from six months to a year waiting for heavy repairs.

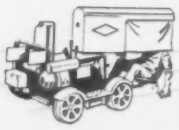
The present users of more than 56,000 hopper cars built with USS COR-TEN Steel are daily capitalizing on these cost-saving advantages. They can best tell you how this tough, strong, corrosion-resisting steel is paying off for them. We'll be glad to give the complete list of users so you can get this information at first hand.

UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO • NATIONAL TUBE DIVISION, PITTSBURGH
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

See "THE UNITED STATES STEEL HOUR"—Televised alternate weeks—
Consult your newspaper for time and station.

UNITED STATES STEEL

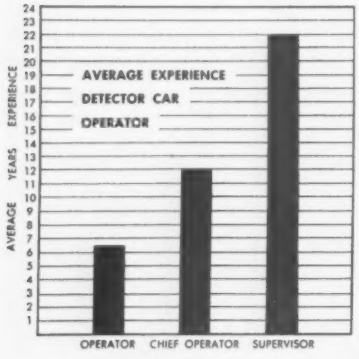
Sperry



HELPING TO KEEP YOUR RAIL SAFE

DETECTIVE IN TRAINING . . .

Someday he'll be a Sperry Detector Car Operator and will have the sole responsibility for making some 500 to 5,000 decisions a day. Right now he has a Chief Operator breathing down his neck as he learns the highly specialized art of detecting defects of rail in track and what they *mean*.



Training men as Detector Car Operators involves a considerable amount of screening even before they see a Detector Car. Intelligence, judgment, eyesight, perseverance and personality are some of the factors that govern the choice of men whose job it will be to test and protect the thousands of miles of rail in track against failures.

The minimum training period for Detector Car Operators is one year—with constant follow-up and study in techniques and procedures in every phase of testing. To give you an idea of the wealth of experience represented in a Sperry Car crew, we have charted the average number of years of service—(lower left) from Operator to Supervisor. It is impressive because their responsibilities are impressive.

The unusually small detail fracture shown below is a type of transverse defect which is extremely difficult to find. Its detection typifies the skill of highly trained Sperry crews.

This kind of specialization is yours wherever you use Sperry Rail Service. This collective experience, plus the most modern equipment that research and engineering can create, rides in every Sperry Car over thousands of miles of rail in track annually. Sperry Rail Service has pioneered the field of practical nondestructive testing for the railroad industry. Today Sperry offers America's most complete range of modern inspection instruments as well as a radio communication system designed specifically for railroads.

Sperry

SPERRY RAIL SERVICE

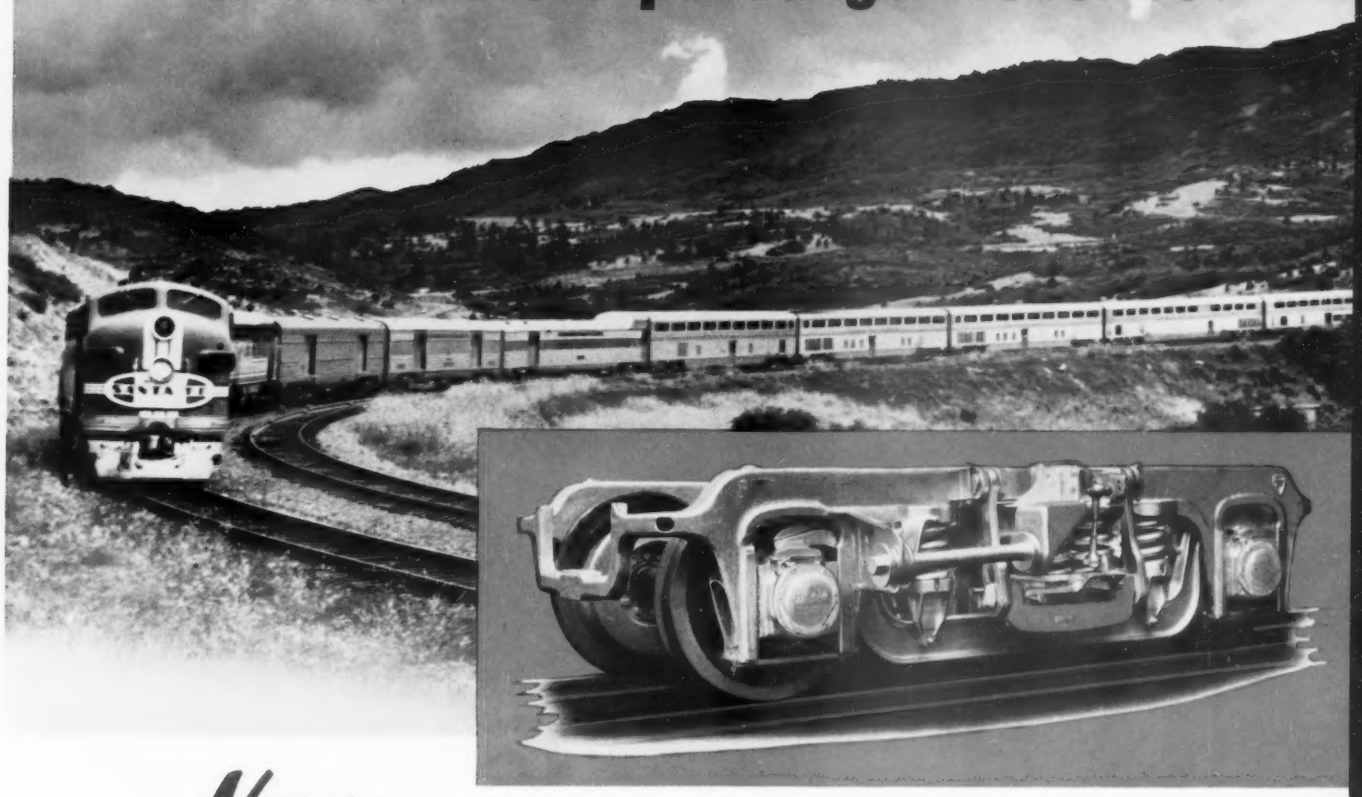
Division of Sperry Products, Inc. · Danbury, Connecticut

Leader in Nondestructive Testing

New York, N. Y., 110 East 42nd St. · Chicago, Ill., 80 East Jackson Blvd. · St. Louis, Mo., 818 Olive St.

Sperry

Improved *Riding* — Greater *Comfort* attracts more passenger revenue!



New

Hi-Level Cars on SANTA FE *El Capitans* Ride Smoothly, Safely on Commonwealth Trucks and Central Bearings

On the Santa Fe *El Capitan* trains in service from Chicago to California, passengers are now enjoying the greatest comfort and lower noise level of the newly-designed Hi-Level chair cars, diners, and lounge cars. For the finest ride and the lowest operating costs, these cars are completely equipped with Commonwealth *Outside Swing Hanger Trucks* of latest design, with *Central Bearings*, instead of center plates.

Commonwealth Trucks with outside spring suspension simplify inspection and upkeep—reduce car body roll—assure better riding at all speeds. Central Bearings eliminate truck shimmy and side bearing upkeep, increase mileage between wheel turnings, and prevent ride deterioration.

To increase time between car shoppings, more and more leading railroads are using this modern truck and Central Bearings. You can do the same on your existing or new cars.

GENERAL STEEL CASTINGS

GEARED TO PROGRESS — P R I — MEMBER

GRANITE CITY, ILL. • EDDYSTONE, PA. • AVONMORE, PA.

Protect the **heart** of every mile of track...

— *install*

IMPROVED HIPOWERS

THE SUPER POWERED SPRING LOCK WASHERS

—with reserve power that holds rails and joints

TIGHTER, LONGER!

Improved Hipowers maintain constant bolt tension, keep bolts tight, absorb shocks, protect rail ends. These super-powered railway spring washers withstand the terrific stresses and strains, and the constant pounding of main line traffic. Reduce maintenance costs by installing National Spring Washers.

A COMPLETE LINE OF RAILWAY SPRING WASHERS

The NATIONAL LOCK WASHER COMPANY

Serving Industry Since 1886 — NEWARK 5, NEW JERSEY, U.S.A.

Year after year, mile after mile conventional rail is being replaced by trouble-free, continuous rail.

Longer rail life at LESS COST

WITH "RIBBONRAIL" SERVICE

Leading railroads throughout the nation are eliminating the expense of assembling and maintaining rail joints. Here are some of the savings now possible with LINDE'S RIBBONRAIL SERVICE.

1. Reduces Overall Maintenance. There are no angle bars, bolts, nutlocks, and copper bonds to install or replace. Maintenance on rolling stock is less too. Wear and tear on motor housings, car wheels, axles, and bearings is substantially cut down.

2. Increases Track Life. The smooth continuous bond does away with battered rail ends . . . and trouble from loose, out-of-line, or worn rail joints is eliminated.

3. Improves Rail Riding Quality. By reducing the operating vibration, continuous rail decreases spillage, and vastly improves riding comfort.

LOOK TO "LINDE" . . . the leader in continuous rail welding, and plan your RIBBONRAIL SERVICE program now. Call or write the Railroad Department of LINDE AIR PRODUCTS COMPANY.

RAILROAD DEPARTMENT

Linde Air Products Company

A Division of Union Carbide and Carbon Corporation

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Division of Union Carbide Canada Limited, Toronto

The terms "Linde" and "Oxweld" are trade-marks, and "Ribbonrail" is a service-mark of Union Carbide and Carbon Corporation.

Supplying to railroads the complete line of welding and cutting materials and modern methods furnished for over forty years under the familiar symbol - - -

Pulpwood Car Hauls More Payload

Shippers' requests for something more economical, and the railway's search for something less troublesome, have resulted in a new design for pulpwood cars on the Canadian National. What has evolved is a specialized high-side, open-top car with greater capacity, which is adaptable to all types of mechanical loading and unloading. At the same time the car's design prevents dangerous shifting of loads in transit.

What Were the Problems?

Canada is faced with supplying pulpwood for not only its own growing economy, but to fill the demands of the United States and other parts of the free world. Prior to World War II, most Canadian pulpwood moved in box and stock cars. Car shortages during and after the war led to the use of gondola and flat cars. When flat cars were assigned to this service, the wood shippers equipped them with end racks and side rails. The end racks permitted larger loads, and the side rails canted the wood toward the center of the car in an endeavor to reduce shifting during shipment.

With their request for a better car, producers pointed out that a racked flat is easier, faster and more economical to load and, from the industry's standpoint, preferable to other types of equipment. It was also pointed out that during postwar years Canadian roads had not provided special cars as had U.S. lines.

Along with demands of the pulpwood industry, the CNR was confronted with another problem — shifted loads. This was of concern not only to the railroads but also to the Board of Transport Commissioners—the Canadian equivalent of the ICC. The AAR forest products loading rules (Pamphlet MD-3) did not cover the use of straight and racked flats in pulpwood service, and neither the railways nor shippers followed specifications for loading this material in gondola cars.

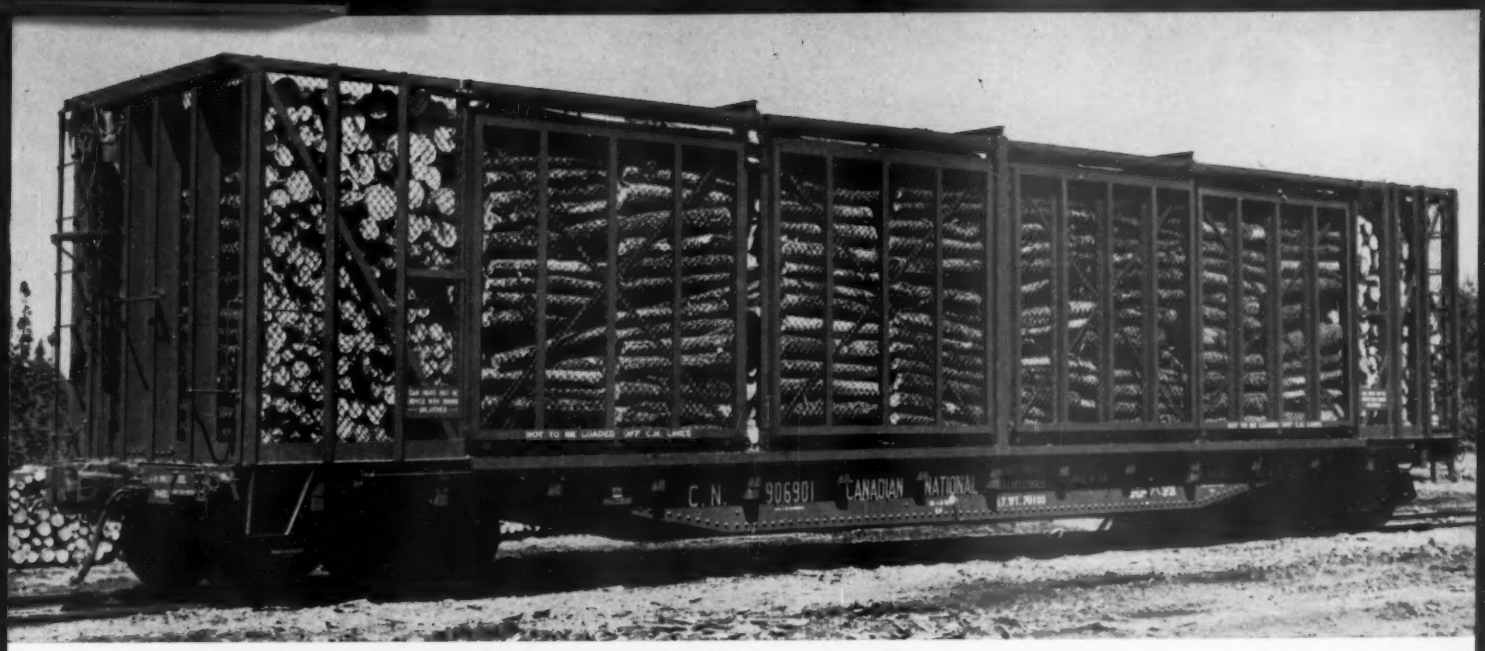
The increasing demand for pulpwood has depleted forests adjacent to the mills, and today pulpwood is being hauled by rail over increasing distances. The CNR serves two mills which obtain the bulk of their wood from points 430 and 550 miles away. That road estimates its average wood haul at 275 miles, in contrast with the U.S. average haul which is estimated at 175 miles.

Some of this wood moves with the bark on; some is completely peeled before shipment; and some trees are killed with chemicals before cutting, which results in loss of all or part of the bark before loading. During the spring and autumn when the roadbed is thawing or freezing, it is very difficult to keep track properly alined. Long hauls, slippery loads, rough track, and higher train and switching speeds all contribute to the problem of shifting pulpwood.

This puts the railways to heavy expense for rebuilding loads. Involved is not only the unloading and reloading, but also the set-out expense, and the loss of car-days. The railroads also are confronted with the risk of accident. There have been cases when racked flats dumped their loads or had individual sticks protruding over the sides of cars where they were a menace to passing trains and to persons and structures along the right-of-way. Such cars are refused in interchange.

All of this resulted in setting up a pulpwood loading committee by the Railway Association of Canada. This group made a thorough study of the hazards and recommended safe loading procedures. The outcome was RAC Circular 110-E, Plans 1 and 2, covering the method of loading and securing pulpwood in open-top cars. Shippers objected to these requirements because the time and cost in installing the specified top side protection offset any savings resulting from the use of racked flats.

SHIFTED PULPWOOD loads on Canadian National have become matter of concern to that road and to Canada's Board of Transport Commissioners.



RESEARCH PRODUCED crib with inside length of 50-ft 10-in., inside height of 9-ft 6-in., and extreme width of 10-ft 8-in. Crib weight is 17,100 lb.

How the Problems Were Met

Late in 1954, the CNR research and development staff began a study of rail transportation of pulpwood and of its loading and unloading. The aim was to develop a special pulpwood car which would reduce the overall cost of moving pulpwood from the woods to the mill—treating such movement as part of the manufacturing process.

General specifications for the car were that (1) it should take maximum advantage of the economies of size; (2) it should be able to haul rough and peeled wood in multiple-track territory at reasonably high train speeds; and (3) it must be adaptable to mechanical or manual loading and unloading.

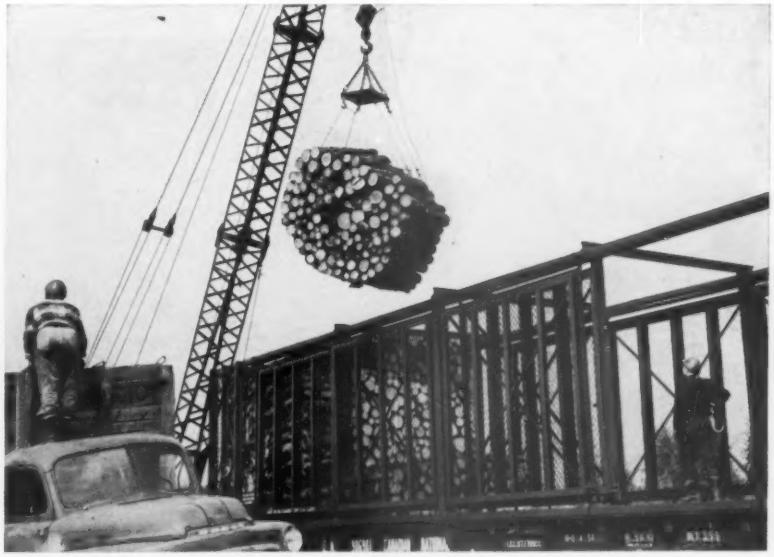
Building the Car

Gondola cars were not considered because of their low capacity. The CNR did study the standard box car, a roofless box car with two door openings on each side (used in Maine), and the end-racked flat car. Time studies showed the relative economies of each of these designs and the railroad has since been able to compare them with the design finally adopted (see chart). Consideration was given in each case to mechanical loading and unloading, although mechanical loading is not extensively used in Canada now.

The first concept was an open top crib without doors or movable sides. The uprights were to be spaced to retain the lading while leaving openings through which wood could be passed during manual loading and unloading. Manual operations would still be complicated, and it was decided to adopt an enclosed crib-type body with movable sides. The side openings had to accomodate the 4-ft logs standard in most of Canada and the 8-ft logs shipped from some points in northwestern Ontario.

To get a prototype car into service the design was worked out for application to one of the CNR's standard 52-ft 6-in. flat cars. The crib consists of two very sturdy steel end frames and skeleton steel side frames. The top side angles are braced with three substantial crossties located over the door posts at the quarter and mid-points of the car.

There are four 9-ft 6-in. sliding skeleton steel doors on each side. These doors are 8-ft 8-in. high, and are hung from the top on a slide bar supported on the top angle. Each pair of doors toward each end of the car is arranged so that the door adjacent to the center of the car will slide back over the door toward the end



VISIBILITY for operator of mechanical loading equipment is advantage of wire mesh sides and ends.

Canadian National
PULPWOOD LOADING AND UNLOADING STUDY

TYPE OF CAR	CAPACITY (Cords)	LOADING PROCEDURE		UNLOADING PROCEDURE	
		Manual	Mechanical	Manual	Mechanical
Standard CNR 36-ft Box Car	16	20 to 25 man-min. per cord	Impractical	16 man-min. per cord	Impractical
Roofless Box Car Two 6-ft Doors on Each Side	19	19 man-min. per cord	15 man-min. plus 5 mach.-min. per cord	10 man-min. per cord	Impractical
Conventional Racked Flat Car	22	17 to 19 man-min. per cord	16 man-min. plus 6 mach.-min. per cord	10 man-min. per cord	5 man-min. plus 5 mach.-min. per cord
CNR Pulpwood Car*	29	15 man-min. per cord	15 man-min. plus 5 mach.-min per cord	9 man-min. per cord {With Roll-out or gravity unloading 7.5 man-min. per cord	5 man-min. plus 1 mach.-min. per cord

*Note: With exception of push-off mechanical unloading, no accurate time studies were made on CNR pulpwood car. Times are indicated on an elapsed time basis.

of the car. The end door will also slide behind the center door. End frames, side frames and doors have an inside skin of No. 6 gage, heavy-duty, chain link wire mesh to retain the load.

The doors are suspended only from the top rod; they are free to swing out at the bottom when they are unlatched. This latching system is a crank and pin arrangement with three pins for each door. Each door is independently latched, and controls for the individual doors are located at the car ends where the man operating these mechanisms will be protected.

Manual loading of this car is much like loading pulpwood in a box car. The end sections are loaded in exactly the same way. With the doors nearest the ends of the car open, the portions at these doors can then be loaded like a racked flat. These doors are then closed, and the center doors opened to continue the loading. With the car's length, and because 19 ft of each side can be opened at one time, two crews can work without interference.

The three crossties present no interference to mechanical loading of this open-top car. Side doors must be latched; and then grapple, orange peel or sling loading can be employed. The wire mesh sides and ends make it possible for the crane operator to see the entire loading sequence. Capacity of the car is 138,000 lb—29 cords of softwood and 25 of hardwood.

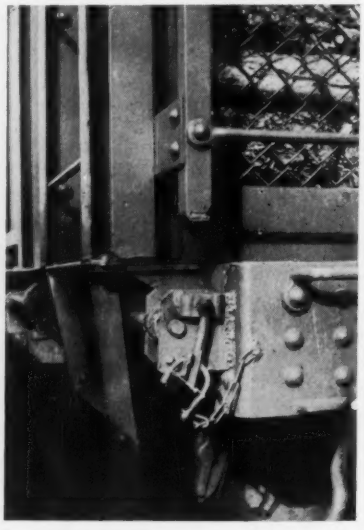
Unloading the Car

Manual unloading has been simplified because 38 feet of the car side can be opened. Time required is about the same as for manual unloading of a flat car. Mechanically, it is possible to unload the car through the top with an orange peel or grapple, but this has not been tried yet. It can also be unloaded with a pusher by opening opposite side doors. This pusher unloading would leave only the ends to be unloaded manually.

Much of the lading can be emptied by gravity if the logs are loaded lengthwise in the car (Railway Age, February 4, p. 17). It is only necessary to clean out the end sections and some of the car floor. Elevating one rail of the unloading track should tilt the car so that its 38-ft center section would be completely self cleaning.

The prototype car has been operating between woods in northern Quebec and a pulp mill in the southern part of the province. Tests have confirmed its design concepts. Its capacity, its safety, and its adaptability to either manual or mechanical loading and unloading are all characteristics which are attractive to the pulp and paper industry and to the Canadian National.

PUSHER UNLOADING (above)can be done because side doors can be rolled back to open almost entire side of car.



Locks for door latches (right) are at car ends to protect operator; each door is released separately.

How Data Is Sent Card-to-Card

The Chesapeake & Ohio has a large scale computer in its Cleveland general offices, which is used for payroll and other revenue accounting processes.

Data is collected and prepared for computer input at three regional accounting offices: Richmond, Va., Detroit, and Huntington, W. Va. The basic data is processed from documents and put onto punched cards. Early in each accounting period, cards are shipped to Cleveland, but near the end of the period, the information on the punched cards must be transmitted via wire communications facilities to the computer.

Believing that such data could be transmitted over telephone circuits, the C&O communications department and the road's Methods Research Office jointly conducted tests of transceivers and associated telephone circuits to obtain information about operating characteristics of transceivers and the circuits required. A report to C&O management* sets forth the objectives and test results.

What C&O Wanted to Know

1. Determine transmission speeds for various card layouts to aid in planning the most efficient card design and programming routine.

2. Determine the characteristics of the telephone circuits used for data transmission, including response and losses at various frequencies, as related to transceiver performance.

3. Determine the amount and effect of interference between any two transceiver channels, and of crosstalk from other telephone circuits.

4. Obtain operational requirements, e.g., special signaling possibly needed during multichannel operation.

5. Find out the reliability of equipment and circuits, and the accuracy of transmissions.

* Prepared by P. A. Flanagan, superintendent of communications; I. A. Payseure, assistant communications engineer; and H. R. Wickenden, methods research officer.

Here's What C&O Found Out

1. Transceiver effective speed, compared to Teletype, was found to be 133 words per minute for the printing transceiver and 150 wpm for the non-printing unit. This speed was obtained by straight 80-column transmission.

2. Telephone circuit characteristics were satisfactory for transceiver use on Channel 1 (800 cycles per second) and Channel 2 (1,300 cps). The Detroit-Cleveland circuit had too great a loss for operation on Channel 3 (1,800 cps) and Channel 4 (2,300 cps). Circuits should carefully be checked for losses over the range of 500 to 2,700 cps.

3. No noticeable effect due to interference between adjacent channels, nor could any trouble be directly attributed to crosstalk from other circuits.

4. The multichannel operation tests pointed up the need for other signals, in addition to those provided for requesting telephone conversation or indicating the end of a transmission. This would allow maximum utilization of the circuits by avoiding use of the telephone.

5. Reliability of equipment and circuits was very good throughout the tests. No trouble was experienced with telephone circuits after the initial installation. During the tests there was no known case of an error being received and punched.

How Transceivers Operate

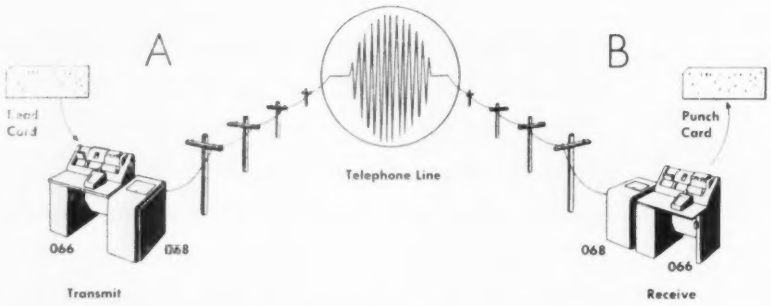
TRANSCEIVERS—What They Are and How They Operate

The data transceiver is a machine for transmitting and receiving IBM punched card information over telephone or telegraph circuits. This information is read directly from the punched cards and received in the form of a punched card. The transmission of data from card to card is direct, without storage or intermediate steps such as mail or punched paper tape.

The machine can be programmed to skip information or blank columns while transmitting or receiving and to duplicate common information while receiving.

A transceiver has two units. The 066, or reading and punching unit, is used for reading, punching and printing the cards, and the 068, or telephone signal unit, is used to convert the data read from punched holes into coded electrical signals at the transmitting end and also to decode the electrical signals to permit punching the same data at the receiving end.

The original punched cards are read by the transceiver reading and punching unit at location **A** in diagram. The telephone signal unit translates the data into electrical impulses and transmits them over the telephone circuit. At location **B** the telephone signal unit receives the impulses and decodes them. The punch unit then punches a card containing all or a selected part of the data in the original cards.



PUNCH CARD INFORMATION is "read" by a transceiver for transmission over a wire circuit to another transceiver for producing punch cards.

Railroading After Hours with Jim Lyne

NEW CONFERENCE METHOD—The DT&I's President Smucker the other day in Ann Arbor said he thought a lot of conferences are unproductive because all discussion is on points of disagreement. Instead, he suggested this approach:

"Let's see if we can agree what year it is, then on what day it is. Then on whether we want prosperity or depression. If we build up a foundation of things we agree on, when we finally work up to the differences, we'll realize how relatively minor they are, in proportion to the area of agreement."

GIRDER BILLBOARDS—The move to put overpass girders to work as billboards to sell railroad service is catching on. Operating VP Jack Hiltz of the D&H told me the other evening that they're going forward with the program—and the Rutland's doing the same. I heard a rumor the other day that the trucking people are figuring on going into billboard advertising—but their billboards will cost them money, while the cost to the railroads is only that of paint or illuminated lettering.

BAR POTATOES—The Bangor & Aroostook has sent me a carton of choice Maine spuds, which I appreciate—and which also starts me to thinking (as I did when the GN sent me some apples for Christmas). Identifying itself with local produce certainly has double edged publicity value—pleasing not only to the recipient but the railroad patron who is the producer. This sort of thing could go far, if the idea should catch on. For example, there are railroads serving the ham-producing areas of Virginia—not to mention that some railroads have the makers of automobiles as customers!

Meantime, I *am* grateful for the apples and the potatoes, whether the idea spreads to other products or not.

PASSENGER SERVICE FRIENDS—The railroad passenger business has taken an awful kicking around, but its supporters are beginning to rally—the most recent evidence being the formation of a passenger research committee by RPI under the chairmanship of George Green of Pullman-Standard.

The way it looks to me, there are kinds of passenger service capable of great development profit-wise, just as there are others that are hopeless, and a drag on the whole enterprise. No department store retired from business when people quit buying bedroom crockery—the stores just quit stocking the unwanted goods, and turned instead to pushing the merchandise that people still showed an interest in buying.

A BROODING DUCK—Public Relations Director Hal Sims of the Western Railways told me the other day that some years ago on the Great Northern, they had a superintendent at Great Falls who put out an order to engine crews, asking them not to dump fires near a certain spot—the reason being that a brooding duck was nesting nearby. When the newspapers got the story it was wired all over the country.

The point is that the concern of the superintendent about the matter was completely authentic. It was not a "press agent stunt"—concocted with the primary purpose of getting publicity. The conscientious public relations man would not seek to make railroaders appear to be humanitarians if they aren't—but it's certainly sound practice to let it be known when they are.

REVEALED AT AREA MEETING . . .

What the Engineers Are Doing . . .

Railroad engineering officers are finding that their responsibilities go far beyond technical matters. This was brought out strongly last week in the sessions of the American Railway Engineering Association's annual convention at St. Louis.

It was particularly noticeable in a number of special addresses interspersed between reports of the association's standing committees.

About Personnel Problems . . .

Unemployment Insurance. How to save the railroads $100 million. That might well have been the title of an address by Thomas M. Healy, a member of the Railroad Retirement Board. He didn't talk about pensions, but about the cost to the railroads of administering the Railroad Unemployment Insurance act.

The expense of the act comes about, explained Mr. Healy, because the railroads are required to pay the cost of administering it on a sliding scale ranging from ½ per cent of the taxable payroll when the balance in the account is over $450 million, to 3 per cent when it falls below $250 million.

Heavier expenses loomed ahead for the railroads when the balance in the account did drop, "with startling suddenness," from its peak of $956 million in 1948 to less than $400 million in September 1955, "and an increase in tax contributions by management was inevitable."

How can the railroads help to reduce the cost of unemployment insurance? It's simply a matter of cooperation and coordination between railroad management, railroad labor and the Railroad Retirement Board, he said.

Although there were an average of 126,000 experienced persons on the unemployment rolls throughout 1954, a total of 158,000 new entrants, having no previous railroad service, were reported on railroad payrolls in that year. A program to bring the man and the job together was initiated then, said Mr. Healy. Through the cooperation of the railroads and railroad labor, and through steps taken by the board itself, there was a reduction of over $100 million in benefit payments and administrative costs during the last fiscal year, he stated.

How were these savings accomplished? Here is one example, as cited by Mr. Healy:

"In February 1956, anticipating the usual spring recruitment of maintenance-of-way labor, we compiled an inventory of all such claimants, including B&B forces, by locations in groups of ten or more. This gave to each railroad a ready reservoir of experienced workers. As a result, on May 31, 1956, we had but 10,000 such claimants left on the rolls compared with an average of 34,000 on the same date in the preceding three years."

Railroad and organizational lines are being crossed "whenever and wherever the welfare of an individual, or a group, is paramount." For example, track and shop men have been converted into train service employees; brakemen into signalmen; a furloughed switchman is now a ticket clerk, etc.

A big chunk of the savings came about because of the board's activities in finding jobs for furloughed employees. During the past year, the board found jobs for 30,804 active claimants and placed another 25,000 potential claimants before any benefits were due for a total of 55,000 persons who, otherwise idle, would have been entitled to receive unemployment insurance. Mr. Healy placed the resulting savings "in excess of $20 million."

Here are some suggestions by Mr. Healy to construction and maintenance officers for conserving the unemployment insurance account:

"1. Recall your own MofW and B&B furloughees;

"2. Seek the transfers, or conversions, of furloughed employees in other departments on your railroad;

"3. Call on the Railroad Retirement Board for the labor needed—our offices are strategically located—thereby insuring preference being given to claimants;

New AREA Officers

President, Ray McBrian, director of research, Denver & Rio Grande Western, Denver; vice-president to serve two years, F. R. Woolford, chief engineer, Western Pacific, San Francisco. B. R. Meyers, chief engineer, Chicago & North Western, and junior vice-president of the association, was automatically advanced to senior vice-president.

The directors elected are: A. V. Johnston, chief engineer, Canadian National, Montreal; W. H. Hobbs, chief engineer, Missouri Pacific, St. Louis; A. B. Stone, chief engineer, Norfolk & Western, Roanoke, Va.; and J. C. Jacobs, engineer maintenance of way, Illinois Central, Chicago.

Members of the Nominating Committee are: T. M. Von Sprecken, assistant to chief engineer, Southern, Washington; T. F. Burris, chief engineer, system, Chesapeake & Ohio, Huntington, W. Va.; J. A. Bunjer, chief engineer, Union Pacific, Omaha; F. L. Etchison, chief engineer, Western Maryland, Baltimore; and W. D. Kirkpatrick, assistant to chief engineer, Missouri Pacific, St. Louis.

At the Railway Age Breakfast Bar . . .

J. P. Gannon, division engineer, Soo Line; Jim Crossett, Simmons-Boardman Publishing Corp.; W. B. Peterson, assistant engineer, Soo Line; H. R. Peterson, chief engineer, NP; L. V. Johnson, chief engineer, Soo Line.

◀ **C. G. Grove, area engineer, construction, PRR; M. S. Westlund, Jackson Vibrators.**

J. R. Thompson, Simmons-Boardman Publishing Corp.; J. W. Christoff and R. Ellefson, Mannix International, Inc.; Blair Blowers, Jr., Railroad Materials Corp.

From IC: H. F. Longhelt, asst. div. engineer; W. O'Connell, estimator; R. H. Peak, div. engineer; D. S. Bechly, asst. to engineer of bridges; G. W. Mann, Jr. engineer.

"4. Make sure that all hiring officers or so-called commissary companies exhaust all claimant possibilities before engaging persons with no previous railroad experience; and

"5. Notify board offices of all discharges or voluntary quits."

Recruiting College Men. Employment was the subject of another address, in which the emphasis was on college graduates and what must be done by an industry to get its share. E. C. Kubicek, director, alumni relations and placement, Illinois Institute of Technology, made some suggestions on how to carry out recruiting efforts, particularly if the company doing the recruiting is interested in "securing only the best."

It is very important, he said, to pick the "right man" to act as the company's representative. He must be able to "talk the language," of the college officers and the students. To the graduate, the company representative *is* the company.

This representative, said Mr. Kubicek, must know his company as intimately as possible. Choosing the right representative is important for other reasons. His "judgment in screening graduates and his ability in interesting them in his company will have more than a little to do with the company's future. If the company representative is empowered to hire, as is sometimes the case, his position assumes even more importance in today's picture."

Companies with training programs seem to stand high in the graduate's list of preferences, according to Mr. Kubicek. "Type of work" is the number one reason given by graduates for accepting employment with industry. All things considered, said the speaker, salary is not the important factor in the choice of the graduate in a company. "We have also found in studies that a $25 differential either way will not make too much difference."

Who's Responsible? The responsibility of engineering officers for developing technical personnel for the railroad industry was dealt with in an address by R. G. May, vice-president, Operations and Maintenance Department, Association of American Railroads.

The rule of supply and demand applies here, he said, because of a critical shortage of engineers and scientists.

As one way to overcome this shortage, Mr. May passed on a suggestion "that we merchandise science in the same manner that industrially sponsored television shows pay participants for knowledge of French cooking, geography and even batting averages."

The development of an organization that will "insure continuity of successful policies," is high on the list of overall responsibilities of an administrator, said Mr. May.

But the responsibility of the engineer goes even further. "Not only must the engineering department provide fully qualified manpower for the important positions in the various divisions of that department, but it is also frequently called upon to furnish personnel for key positions in other departments.

. . . And About Technical Problems

Rolling-Load Tests. From rolling-load tests to freight-car rollability—that pretty well describes the range of technical subjects discussed in addresses sandwiched in between reports of standing committees.

G. M. Magee, director of engineering research, AAR, reviewed the research activities of the Engineering Division during the past year. He announced that the new engineering laboratory building at Chicago is expected to be ready for occupancy during April.

The general objective, he said, is to provide accelerated testing procedures in the new building which will simulate service conditions for evaluating components of track and bridge structures within a few weeks, rather than having to wait for 15 to 20 years for service evaluations. Testing machines now in the basement of the administration building will be moved to the new engineering laboratory, as well as most of the rolling-load machines now located at the University of Illinois. In addition, he said, an appropriation of $250,000 has been approved for the acquisition of new testing equipment in the building.

The 9-in. and 12-in. stroke rolling load machines provide an effective means of studying rail metallurgy and defects, butt welds and techniques for building up battered rail ends by welding, said the speaker. The machines, he continued, do an excellent job of determining whether there are interior defects that will act as stress raisers and develop internal progressive fractures with the passage of millions of wheel loads. Six of these machines will be available for this work.

Mr. Magee also gave a resume of the research projects being carried out on behalf of the Committee on Rail. These include the annual compilation of rail failure statistics; the metallurgical examination of all types of failures in control cooled rail that resemble transverse fissure failures; studies of rail design (current effort is in the direction of reducing the number of rail sections for the purpose of promoting economy in the cost of rolling rail); laboratory and service tests of various designs and joint bars; and studies of welding techniques and electrodes for welding battered rail ends.

Some of the problems are not proving easy to solve, e.g., that of shelly cracks in rails. Rolling load tests have been made of alloy rails, heat treated rails and high-silicon rails in an effort to find an answer. "This has been a most challenging problem," said Mr. Magee, "with no indication that any specific defect in the rail steel is responsible for such failures."

A-Bombs and Timber Bridges. An account of the railroads' participation in "Operation Que," was given by Seymour K. Coburn, chemical engineer on the AAR research staff. This was the name given to an A-Bomb test, designed to allow a cross-section of American industry to develop basic information insofar as their individual interests are concerned.

It was decided, as the railroad phase of the test, to determine the effect of the A-Bomb blast on fire-retardant paint applied to treated timber piling. As Mr. Coburn explained it, the results showed that white paint, augmented by fire-retardant components, offers more positive protection than black paint containing the same fire-retardant constituents.

The rollability of cars was discussed by F. R. Smith, chief engineer of the Union Railroad. It was discovered on this road, in connection with designing a layout for a new car dumper, that the rollability of the same kind of cars varies on different grades. The signal companies, said Mr. Smith, "have done an outstanding job to help us control the movement of railroad cars with automation. But with the wide variation in rollability, automation can't do much more for our cars than your wife can do to make a tender, juicy, flavorable steak from an old steer. You still have the same old piece of meat. We are deeply indebted to the signal companies but they have gone about as far as they can go. Now, as railroad people, we must do something on our own behalf to relieve our problem of variation in car rollability."

IN THE RECEIVING LINE . . . G. M. O'Rourke, assistant engineer maintenance of way, IC; R. R. Manion, assistant vice-president engineering, NYC; F. R. Woolford, chief engineer, Western Pacific.

BUYING COMMITTEE LUNCHEON TICKETS . . . M. S. Reid (background), assistant engineer maintenance, C&NW; L. A. Loggins, chief engineer, SP Lines in Texas and La.

ONE BRIDGE MAN TO ANOTHER . . . C. A. Roberts, engineer structures, Erie; and G. W. Benson, superintendent structures and materials, CofGa.

Will Better Service Mean Some 'Inefficiency'?

In this Railway Age interview, J. Edward Jay, economist and former railroad man, argues that it will be necessary for railroads deliberately to adopt what have been considered inefficient operating methods, in order to meet shippers' needs adequately.

Q. You say there's increased interest in carload transit time. What makes you think so?

A. One instance of the railroads' interest is the current work of AREA Committee 16, a permanent study group concerned with economics of railway operations. Another instance, from the shippers' side, is the exhibits submitted at the recent ICC demurrage hearing. These are indications of the search being made for better data on carload transit time.

Q. Is it possible that the large volume of operating statistics compiled and reported by all railroads cannot provide an accurate measure of transit time?

A. Only estimates can be obtained from reported data for the reason that part of the overall transit time information is not recorded. However, the complete time record can be obtained by an individual railroad if its management wants it.

Q. What part of the overall transit time is not recorded by railroads?

A. The "total time in transit" may be defined as the entire period of the railroads' responsibility to haul the carload. It is doubtful that any railroad regularly records and assembles the time information to show, for example, how many hours elapse before a carload begins its initial train movement; and similarly, after arrival at the final station until placed for unloading or delivered to a connecting line. These two periods combined might be from one-fourth to one-half of the total transit time on an individual railroad.

Q. How would the definition apply to constructive placement, since the cause is attributed to the consignee?

A. The period of responsibility relates to custody rather than comparative blame. To omit this type of car detention from the data would condone the cause without further inquiry. It is the persistent disclosure of irregularities, inefficiencies and inequities, that eventually produces corrective action. Also, strict adherence to faster and dependable freight schedules should reduce instances of constructive placement.

Q. You stated that accurate transit time data are available on the individual railroad. Does any railroad compile the information for itself?

A. It is quite possible that a few do so. However, accurate current information on carload transit time really serves no practical purpose in the day-to-day operations at the division level. The information, and what might be done with it, is primarily for policy consideration. For such broad purpose fair estimates can be used.

Q. What would be the nature of policy questions raised by the information?

A. They relate to the shippers' needs. To illustrate, let's apply an estimate of overall transit time. The average carload is in a moving train approximately 10 per cent of its total transit time; it travels about 75 miles a day at 3 miles per hour.

Q. How do you relate this performance to the customers' requirements?

A. Dependable and expeditious time in transit has always been important to railroad customers, particularly consignees. Intensive competition in their business demands maximum efficiency in operations. The timely receipt of raw materials, fabricated components and finished goods is geared to their operations. Irregular deliveries compel excessive investment in inventory, to which are added storage costs and related risks. Of course, these basic needs are well known. If the estimate of transit time is near correct, it validates the complaint that railroad service is irregular and slow. An extension of efforts to meet these needs, beyond the present compromise, will further oppose perfectly correct operating objectives.

Q. Undoubtedly, the "correct" objectives are heavier car loading, longer trains. How would efforts to reduce transit time affect these objectives?

A. The reasons are historical as well as technical. Railroads were lo-

(Continued on page 72)

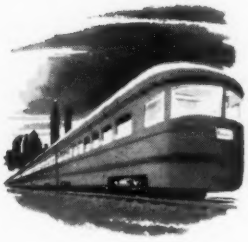
J. Edward Jay is a transportation economist with the federal government, who is presently assigned to the Department of Agriculture. He was in railroading for 18 years with the Southern Pacific and Katy, where he had operating experience as a train dispatcher. While working night tricks in that position, he obtained his college education by attending day courses on a full-time basis. He then went on leave of absence to take the railroad course at Harvard Business School. Mr. Day is also an engineer and lawyer, being a member of the American Bar Association and the American Railway Engineering Association's Committee 16, for which he recently has been devoting much attention to carload transit time.

J. EDWARD JAY

Being interviewed is H. A. Fuggiti, Acting Senior Development Engineer

"Here's where the heavy slugs of power come from"

At the Exide Laboratories—**Reporter:** Just exactly what part of the battery is that, Mr. Fuggiti?



Fuggiti: This is the Exide-Ironclad positive plate. And in any battery, power reserve is governed by positive plate area.

Reporter: Then do you mean that Exide-Ironclad Batteries have *more* positive plate area?

Fuggiti: Exactly. You can see that here. The cylindrical power tubes are arranged in a row. So the semicircular sides give an effective plate area one-third more than the plate size.

Reporter: How does that increase power reserve?

Fuggiti: Because there's a bigger working surface of battery plate exposed to the electrolyte. Power response is faster.

Reporter: What does this mean in battery performance?

Fuggiti: It means the battery can provide power to spare for peak power loads as well as a dependable source for continuous loads.

Reporter: Obviously this is an important feature of the Exide-Ironclad Batteries.

Fuggiti: Yes it is, but it's just one of many engineering details that contribute to their long life and high capacity.

Note to battery users: Whenever you order heavy duty batteries or the equipment that requires them, be sure to specify Exide-Ironclad. For detailed bulletin, write Exide Industrial Division, The Electric Storage Battery Co., Philadelphia 2, Pa.

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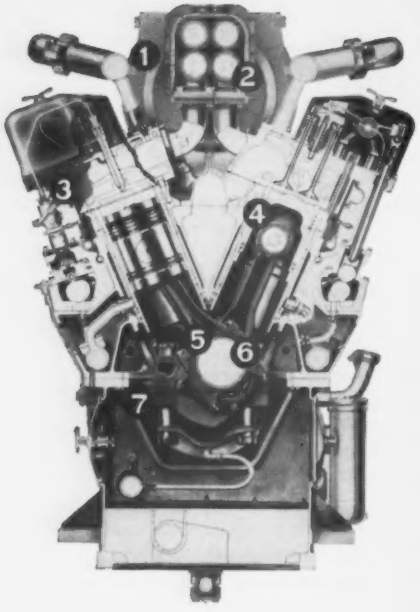
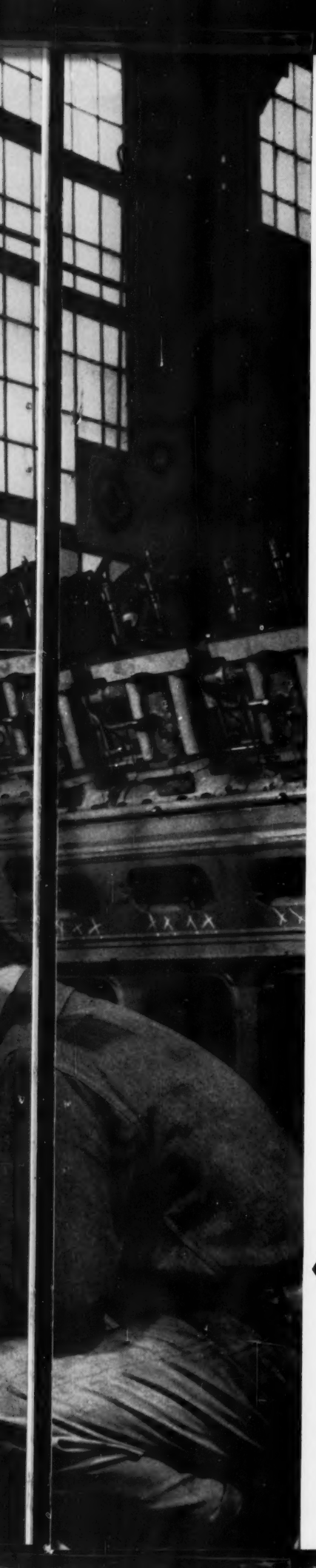


Cross section of 244 engine shows major improvements accomplished in reprofiting: (1) water-cooled turbo; (2) Ni-Resist exhaust manifold; (3) high-pressure fuel injection system; (4) Ni-Resist insert pistons; (5) grooveless and partially grooved bearings; (6) hardened, chrome-plated crankshaft; (7) serrated cylinder block and caps.



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Reprofiting adds locomotives to the fleet. Programs nearing completion have demonstrated that substantial increases in mileage per month per unit are the result. Design improvements provide increased service life and assure greater dependability.

The cost of reprofiting is low. And the least expensive way to accomplish it is through ALCO's programmed plan. ALCO has the equipment, the personnel and the techniques to accomplish this work at the best price. All work done in ALCO reprofiting, as well as the parts applied, is covered by an ALCO warranty.

We hope you will investigate reprofiting. Your ALCO representative can give you more details, and he will work with you in developing specific data and in drawing up a reprofiting plan. Or, if you wish, you may initiate action by writing Transportation Products Division, Dept. TR-2, P. O. Box 1065, Schenectady 1, N. Y.

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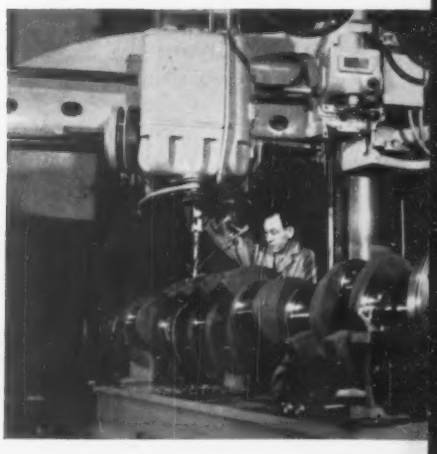


Special ALCO facilities, such as those for chrome-plating crankshafts, lower the cost of reprofiting for you. You also get the advantage of work done by specialists who know the engine best. Shaft, right, has been chrome-plated for hardness and machined back to original dimensions, now is being balanced. Cost: a fraction of that of a new shaft.

Grotz Replies to Shoemaker

William White and other executives comment pro and con on Western Maryland president's plan for federal aid to boost freight-car buying

"MY SUGGESTION for making some form of government aid available to such railroads as might elect to seek it was a result of long and 'agonizing' study of the needs of the industry."

So writes President W. Arthur Grotz of the Western Maryland—in answer to DL&W President Shoemaker's criticisms of the proposal that federal credit be sought to stimulate freight-car purchases. Mr. Grotz' ideas were set forth in an article in Railway Age, Feb. 11, p. 30, and Mr. Shoemaker's rejoinder appeared on p. 68 in the Feb. 25 issue.

"Any student must be impressed with the fact," Mr. Grotz goes on to say, "that large numbers of freight cars are ordered only in the presence of unusual stimuli, such as occurred at the start of the Korean War and during the last few months of accelerated amortization in 1955. During the ten years 1946-1955, inclusive, the Class I railroads retired a total of 782,913 freight cars, or an average of 17,291 per year. At the end of that period there were 385,922 cars over 30 years old and 264,876 cars between 26 and 30 years old.

"What orders are the railroads likely to place in the absence of some stimulus? Well, in the three years prior to 1955, during which accelerated amortization was available, the orders were, respectively, 34,369; 33,565 and 21,976. The year 1956 was characterized by booming prosperity. Orders were for 41,794 cars. Any tapering off in business might well lead to reduced purchases.

"I heartily agree with your editorial comment that the opportunity of the railroads to participate in the great growth of the country will not be helped by 'inaction or slow motion'. What we must seek is a definite stimulus."

There has been comment from a number of other chief railway executives—most of it following, generally speaking, the adverse opinion of Mr. Shoemaker. None of the critics, however, denies the importance of the problem of freight car supply and many of them assert that Mr. Grotz has done the industry a service by dramatizing the issue as he has. One chief executive writes that "one of the most important problems facing the railroad industry is that of raising funds for the tremendous capital outlay that will be necessary in the next 10 years. We believe Arthur Grotz' suggestion is a step in the right direction."

An exception to the stipulation laid down by most of those commenting—viz., that they not be quoted by name—comes from William White, president of the D&H. Mr. White says: "I want my name used, because there is no reason to be anonymous about these things." Mr. White writes:

"I deplore the tendency of industry groups and individuals who more and more run to Washington for help of various kinds. Perhaps laissez faire is out of date and, if it is, then I am out of date and want to stay that way. If our capitalistic profit system is going to continue to exist and government is not to become wholly the master instead of the servant, going to Washington for help has to stop. The Lord knows it's bad enough now. That is one reason we get no tax relief, which is something that this country needs more than anything else in my humble opinion.

A Hard Choice

"Viewing the realities of the situation, however, I must concede that if most of the capital necessary for our competitors to do business is going to be provided by the government, as it has been, then the railroad industry has not only great provocation but perhaps a duty to its security owners to seek government aid. With airline terminals provided through public moneys, and the use of government airway facilities provided to the commercial airlines and private planes at no cost to the user, and the highways provided with public moneys and the commercial users not paying an adequate user charge, and with waterways improved and maintained with public moneys and the commercial users not paying an adequate charge, one of two things has to be done.

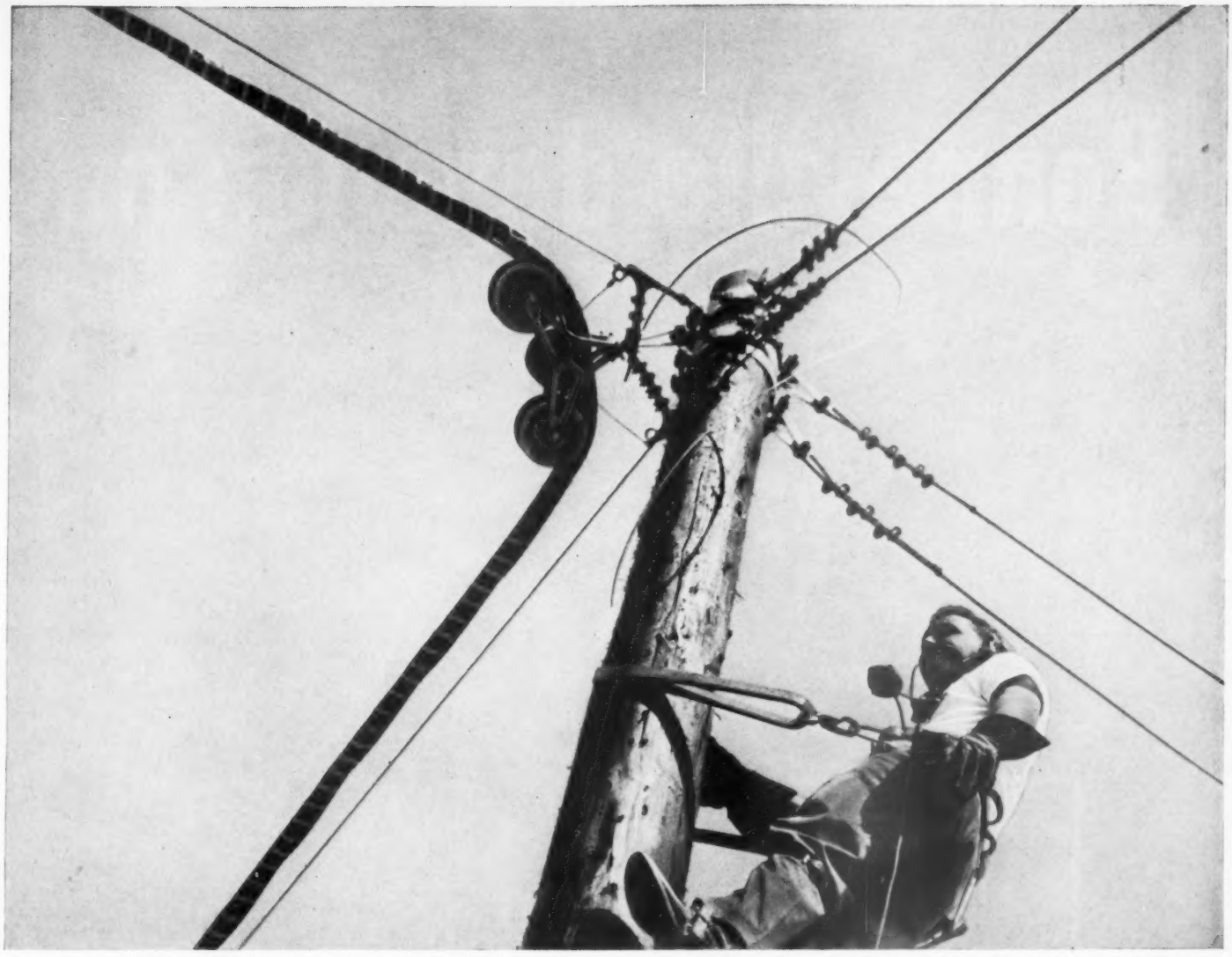
"Either competing forms of transportation using facilities that are provided with public moneys must pay an adequate user charge, or the railroads must be relieved of some of their burden.

"There are, of course, various ways in which railroads can be relieved of some of their burden, and Arthur Grotz' proposal is one way. It would not be a subsidy. Therefore it would be entirely defensible so far as the taxpayer is concerned.

"But so far as the railroads are concerned, they would be in 'hock' to the government and that is what I don't like because when the government provides the money the conditions can be pretty onerous. There are some of us who remember the conditions imposed by RFC when it loaned money and we didn't like those conditions.

"I think Mr. Grotz' proposal is worth serious consideration. It requires more study than I have given to it. It certainly has one great virtue and that is, if the railroads advanced a proposal to lean on Uncle Sam for their freight car supply, the hue and cry that would arise would most certainly bring to public attention the difficult situation in which the railroads find themselves because of the unequal burden that they are required to assume vis-a-vis their competitors in other forms of transportation."

". . . the opportunity of the railroads to participate in the great growth of the country will not be helped by 'inaction or slow motion.' What we must seek is a definite stimulus."



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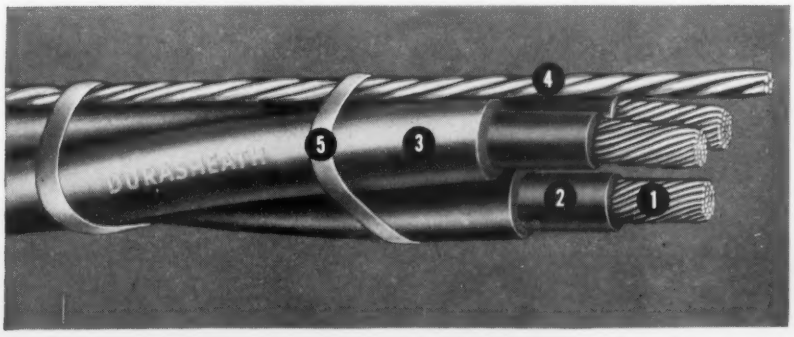

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People in the News

ASSOCIATION OF AMERICAN RAILROADS.—**James H. Bean** named executive vice-chairman, Purchases and Stores Division, Washington, D. C., succeeding **Charles E. Woodson,** who has returned to the **Norfolk & Western** as assistant purchasing agent at Roanoke, Va. Mr. Bean was formerly a buyer for the **Illinois Central** at Chicago.

ATLANTIC COAST LINE.—**James F. Johnston** appointed industrial forester, Wilmington, N. C.

Robert Scott, director of safety and insurance, Wilmington, N. C., retired February 28.

R. L. Groover, chief engineer, ACL, **Charleston & Western Carolina** and **Winston-Salem Southbound,** Wilmington, N. C., appointed assistant general manager. **L. E. Bates,** assistant chief engineer, succeeds Mr. Groover.

BALTIMORE & OHIO.—**Raymond S. Shrode** appointed geologist in the Industrial Development department, Baltimore, Md., succeeding **J. A. Ames,** who has resigned to accept a position with the Alpha Portland Cement Company. Mr. Shrode was formerly commercial engineer, Commercial Development department, Diamond Alkali Company, Cleveland.

W. H. Bettcher, general car foreman, Indianapolis, Ind., retired.

Henry Seitz, designing engineer of bridges and buildings, Baltimore, named structural engineer. **Gurney H. Dayett, Sr.,** assistant to chief engineer, Baltimore, and **John S. Knight,** regional engineer, B&O Chicago Terminal, retired. **H. 9. Ross,** division engineer, Buffalo division, E. Salamanca, N. Y., transferred to the St. Louis division—East End, Washington, Ind., succeeding the late **P. W. Elmore. R. A. Downey,** assistant division engineer, Cumberland, Md., replaces Mr. Ross. **R. G. Rayburn,** division engineer, Baltimore division, transferred to Wheeling, W. Va., succeeding **F. L. Thompson,** whose transfer to the Newark (Ohio) division was noted in Railway Age, Feb. 11, p. 44.

Christopher P. Ruff, commerce agent, promoted to assistant general freight agent, Baltimore, and is succeeded by **Millard I. Zimmerman,** chief clerk, general freight office.

BOSTON & MAINE.—**Daniel A. Benson,** assistant to president, became general manager at Boston on January 1, with jurisdiction in the operating and transportation departments. **Deane R. Folsom,** temporarily assigned to a Passenger Deficit Project Group, returned to his former position as superintendent passenger transportation. **George F. Gallagher,** temporarily assigned to Mr. Folsom's former post, appointed supervisor of passenger car utilization.

Henry Seitz
B&O

Charles A. Dobbins
CNR

Raymond Tenney, passenger car distributor, appointed passenger transportation assistant.

William C. Hamel, assistant auditor disbursements, appointed auditor disbursements, Boston, succeeding **James F. Riley,** retired. **Alburn J. Connell,** car accountant, appointed to head a new department as director—methods and research. **August S. Niewenhous,** formerly assigned to a Passenger Deficit Project Group, appointed car accountant. **Edward Laats,** statistician, Bureau of Statistics, appointed assistant treasurer, Boston, succeeding the late **Clayton M. Morse.**

CANADIAN NATIONAL.—**Thomas M. Pye,** assistant to vice-president of purchases and stores, Montreal, appointed general purchasing agent there. **W. Lorne Shirray,** assistant purchasing agent, Toronto, succeeds Mr. Pye. **George Tousaw,** chief clerk, purchasing department, Atlantic region, Moncton, N.B., appointed assistant purchasing agent, Central region, Toronto, Ont.

Arthur D. Pratt appointed assistant to regional manager of public relations, Atlantic region.

Charles A. Dobbins appointed comptroller of United States accounts, with headquarters at Detroit. Mr. Dobbins will administer the accounting for CNR's United States subsidiaries: the Grand Trunk Western, the Central Vermont, and the Duluth, Winnipeg & Pacific.

CENTRAL OF GEORGIA.—**Albert Cornelius Stephens,** office engineer, track section, promoted to assistant principal engineer, Savannah, Ga. **Robert Kennedy McKinnon,** engineer of bridges, named planning and construction engineer.

John B. Haddock appointed general agent, Louisville, Ky.

CHESAPEAKE & OHIO.—**T. W. Grose,** trainmaster, St. Albans, W.Va., appointed assistant superintendent, Ashland, Ky., succeeding **C. H. Manning,** transferred to Newport News, Va.

W. V. Moseley appointed assistant to superintendent motive power, Richmond, Va., succeeding **J. E. Foster,** who retired January 1.

Frank E. Knotts appointed district passenger agent, New York, succeeding **William P. Walker,** retired for reasons of health.

FRISCO.—**G. J. McGarity,** district manager—sales, Orlando, Fla., transferred to Jacksonville, Fla., succeeding **W. E. Post,** who retired December 31, 1956. **J. E. Seyller,** traffic representative, Tampa, Fla., named district manager—sales at that point, succeeding **H. F. Stender,** retired. **A. C. Sullivan** appointed assistant general freight agent, St. Louis, succeeding **J. F. Jedlicka,** retired.

J. K. Beshears appointed vice-president—personnel, St. Louis

LEHIGH & NEW ENGLAND.—**R. E. Bauder** and **J. S. Mowbray** appointed freight traffic managers, Bethlehem, Pa. Positions of general freight agent and assistant general freight agent at Bethlehem, formerly held by Messrs. Bauder and Mowbray, abolished.

LOUISVILLE & NASHVILLE.—**L. I. Smith,** industrial agent, Birmingham, Ala., retired March 1.

NEW HAVEN.—**Robert W. Hooper,** acting general mechanical superintendent at New Haven (Railway Age, Jan. 21, p. 44), who succeeds **Harvey E. Hales,** chief mechanical officer, has chosen **Russell H. Davis** and **George A. Clarke** as assistant general mechanical superintendents. Mr. Davis was formerly assistant chief mechanical officer and Mr. Clarke was mechanical engineer. **Ralph B. Hart,** assistant to chief mechanical officer, appointed assistant to general mechanical superintendent. **Wilson E. Symons,** general master mechanic, named mechanical engineer. **Donald S. Onnen,** assistant chief mechanical officer, appointed chief engineer of equipment. **William A. Baker,** assistant chief mechanical officer, named general superintendent of locomotive maintenance. **Willard B. Crawley,** assistant mechanical engineer, appointed electrical engineer. **Herbert C. Scovill,** resident equipment engineer, appointed assistant electrical engineer.

Robert S. McKernan appointed editor of Along the Line, New Haven employee publication, succeeding **George P. McCallum,** who recently resigned to join the public relations staff of ACF Industries, Inc. Mr. McKernan, former news editor of Radio Station WELI in New Haven, has the title of assistant to chief information officer and will assist also in general public relations duties.

NEW YORK CENTRAL.—Erie division engineer's office, Erie, Pa., abolished effective February 25 and that territory placed under jurisdiction of **R. W. Orr,** divison engineer, 220 Huron road, West, Cleveland, Ohio.

F. J. Murray appointed assistant engineer—steam heat, New York. **F. F. Dubay** named superintendent of shop, W. Detroit, Mich.

John J. Divney, administrative assistant to passenger sales manager, New York, appointed ticket sales manager of the NYC's six New York ticket offices, with headquarters at Grand Central Terminal, succeeding **George B. Phillips,** who retired March 1.

Leonard H. Rose, assistant secretary, board of pensions, New York, appointed director, employee benefits, a new title, succeeding **Frederick P. Fleuchaus,** secretary, board of pensions, retired. Title of **William D. Trader** changed from salary administrator to director, salary administration.

T. W. Hislop appointed supervisor, water service, Collinwood, Ohio, and the position of water service and corrosion engineer abolished. **H. Wochele,** foreman chemical laboratory, Collinwood, appointed chief chemist, succeeding **A. T. Green,** named manager, material inspection. Mr. Green succeeds **K. D. Relyea,** resigned.

Ralph A. Barnett, division freight sales manager, Indianapolis, Ind., appointed assistant freight sales manager there. **Frank A. Kiefer,** district freight sales manager, Indianapolis, succeeds Mr. Barnett. **Ralph N. Cramer** replaces Mr. Kiefer.

ROCK ISLAND.—**R. W. Heilmann,** inspector, mail, baggage and express department, appointed assistant to manager, mail, baggage and express traffic, Chicago, to succeed **D. F. Hurn,** retired.

RUTLAND.—**Hugh W. Anderson** and **John L. Larson** appointed district sales representatives in charge of newly opened offices at St. Louis and Kansas City, respectively.

OBITUARY

A. F. Walter, assistant to general manager, **Gulf, Mobile & Ohio,** Mobile, Ala., died January 17 at his home in that city.

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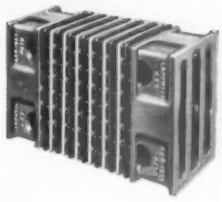

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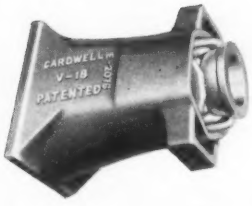

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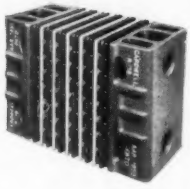

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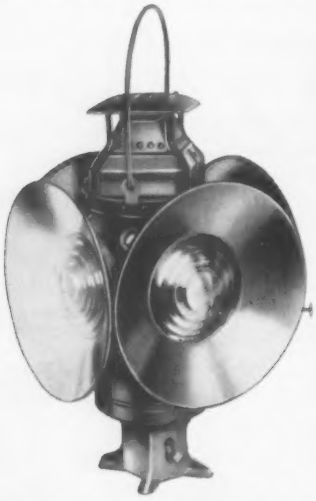

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A mastic developed to fill depressions and provide a tough, anti-skid surface on Nailable Steel Floors. Smooth, easily cleaned surface will withstand impact, is acceptable for all types of lading. Applied as received with notched trowel or screed.

☐ **No. 3011 TAN GROOVE FILLER**
No. 3012 BLACK GROOVE FILLER
3011 (non-asphaltic) and 3012 (asphaltic) sealers for filling nailing grooves in all types of Nailable Steel Floors. Withstands impact, remains flexible without cracking or chipping at all operating temperatures.

☐ **No. 3009 STEEL FLOOR COVERING**
Non-skid, abrasion-resistant coating provides tough, durable covering for steel floors. Easily applied by brushing or spraying, does not require thinning. Steel Floor Covering dries tack free in six hours at 1/32" thickness. Covering attains full hardness in approximately 48 hours.

☐ **RAILWAY INSULMAT**
A water emulsion coating that prevents condensation drip, protects metal against rust and corrosion, seals seams and joints, deadens sound. Developed for steel box car ceilings, passenger car interiors, air conditioning ducts. Adheres to any clean surface. Coverage—six sq. ft. per gallon at 1/4" thickness.

☐ **SPECIFICATION CAR CEMENTS**
Fibrous asphalt protective coatings, made to individual railroad's specifications for composition, drying oil content, consistency. For use on interior or exterior surfaces. Provides excellent protection against corrosion. Available in black, red or aluminum. Coverage: 50 sq. ft. per gallon at 1/32" thickness.

☐ **RED CAR CEMENT**
Tough, durable protective coating for freight car exteriors. Heavy fluid consistency, applied in one coat, eliminates costly painting. Greater film thickness than ordinary paint, provides better protection against rust and corrosion. Made to individual railroad's specifications for freight car red. Coverage—50 sq. ft. per gallon at 1/32" thickness.

☐ **ALL-WEATHER INSULMAT**
A solvent-reduced coating which may be applied outside the year around. Developed for steel box car ceilings, passenger car walls and ends or any metal surface. Prevents condensation drip, protects against rust and corrosion, seals seams and joints, deadens sound. Coverage—six sq. ft. per gallon at 1/4" thickness.

☐ **No. 3021 TAN CEILING INSULATION FOR BOX CARS**
NEW...and *exclusive* with Mortell, No. 3021 is an improved, non-asphaltic cutback type plastic coating developed specifically for preventing condensation drip on galvanized steel box car ceilings. *Impervious to pentachlorophenol solvent vapors.* Eliminates necessity of sealer coat. Excellent adhesion without preliminary acid treatment. Can be applied outside in any weather condition. Coverage 6 sq. ft. at 1/4" thickness.

☐ **ARMORTEX PLASTIC CAR LINER**
Tough, permanent Armortex is available in two grades: 1) *Spray-Brush Grade* for sealing smaller cracks, for coating car lining, ends and floor 2) *Caulking Grade* for sealing larger cracks and gouges in linings, doorposts. Excellent adhesion to wood and primed steel. Easily applied at shop, repair track or siding. Coverage—*Spray-Brush Grade* covers 50 sq. ft. per gallon at 1/32" application.

☐ **MORTEX No. 4**
Protective coating in plastic form that dries to a tough, flexible film with rubber-like appearance. Recommended for underframes and roofs of freight and passenger cars. Also for steel bridges, platforms and runways, to dampproof concrete structures or as a seal over porous insulation. Coverage: 50 sq. ft. per gallon at 1/32" thickness.

☐ **No. 3007 FIRE RESISTANT ASPHALT EMULSION**
Protective coating developed to provide fire protection in addition to resistance against rust and corrosion. Rich, full black finish retains flexibility with age—over wide temperature range. Recommended as protective coating for undersides of baggage and mail cars, for wooden trestles and bridges. Coverage—25 sq. ft. per gallon at 1/16" thickness.

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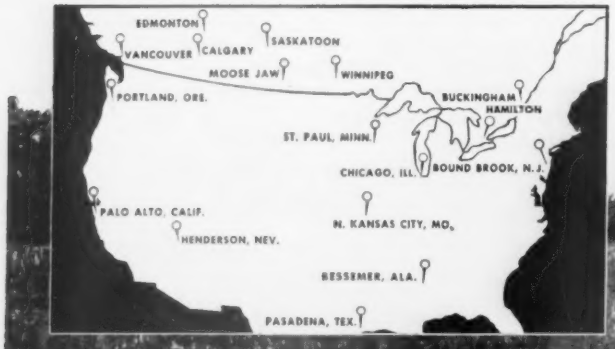

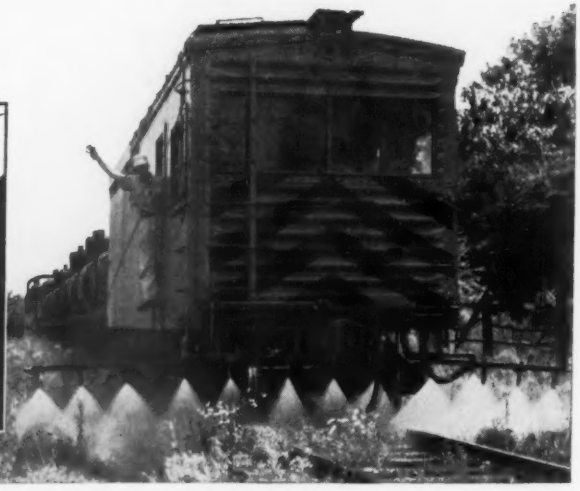

An Advance Over All Existing Devices For Stabilizing Trucks Lacking Built-in Control . . .

HOLLAND RIDE STABILIZER UNIT, STYLE RS-1

The Holland Ride Stabilizer Unit, Style RS-1, is a significant advance over the spring "package" method of Stabilizing Old Style Trucks . . . each installation providing new truck riding qualities at a saving over the cost of a new truck of approximately 80%!

Applying Holland Ride Stabilizer Units, Style RS-1, to such trucks will make them behave by providing a superior degree of stabilization, preventing the bounce, and rock and roll that can cause so much damage to lading, equipment and track.

Now you have a better reason than ever before for making your older cars belong in modern high speed service with Holland Ride Stabilizer Units, Style RS-1.

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All over the country shortline railroads like those listed here are giving 'round-the-clock service that helps make the American railroad system the envy of the world.

Using 70-ton and 95-ton General Electric road switchers powered by Cooper-Bessemer engines with Bendix* Fuel Injection Equipment, these shortline roads maintain high operating standards in the performance of their important work.

Bendix is proud that its fuel injection equipment has received such high endorsement from so many shortline railroad operators.

It furnishes further evidence that when dependable, efficient, and economical operation is a must Bendix is the logical choice for fuel injection equipment. SCINTILLA DIVISION OF BENDIX AVIATION CORP., SIDNEY, N.Y. EXPORT SALES AND SERVICE: BENDIX INTERNATIONAL DIVISION, 205 EAST 42ND ST., NEW YORK, N.Y. *REG. U.S. PAT. OFF.

This Bendix pump and nozzle are used on the type of road switcher pictured above.

Partial list of shortline roads using Bendix Fuel Injection Equipment

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BELFAST & MOOSEHEAD LAKE
COLORADO & WYOMING
DES MOINES & CENTRAL IOWA
EAST ERIE COMMERCIAL
FT. DODGE, DES MOINES & SOUTHERN
FRANKFORT & CINCINNATI
GEORGIA NORTHERN
GREENVILLE & NORTHERN
HAMPTON & BRANCHVILLE
LANCASTER & CHESTER
LIVE OAK, PERRY & GULF
MISSISSIPPI EXPORT
MOBILE & GULF
MUNCIE & WESTERN
NORTHAMPTON & BATH
RAHWAY VALLEY
SANFORD & EASTERN
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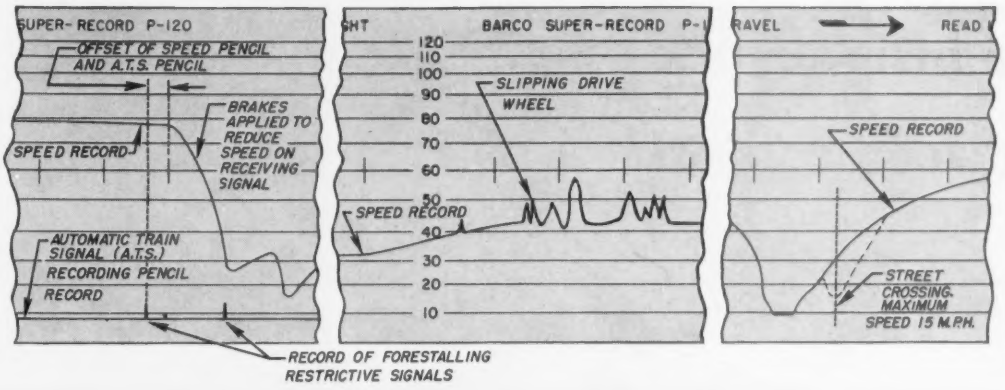

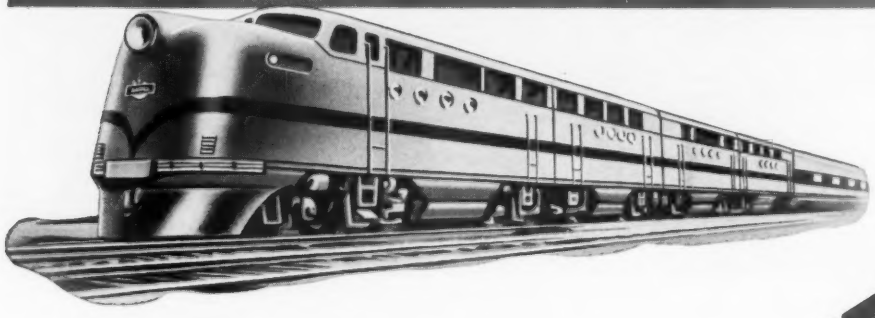

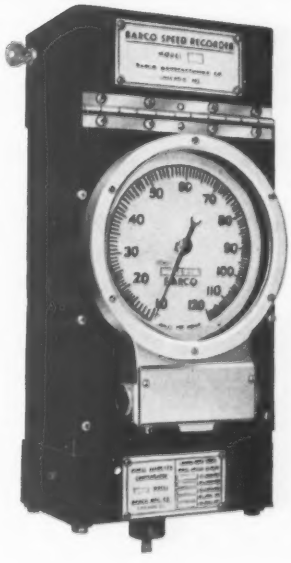

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Neglect can be very costly when a diesel engine is involved. Here you see what oxygen cell corrosion did to a water-cooled bearing. Such bearing failure can be caused by inhibitor deficiency or a complete lack of water treatment. Resultant corrosion then does a thorough job of destroying the part. After that, the only thing to do is stop the engine and replace the bearing.

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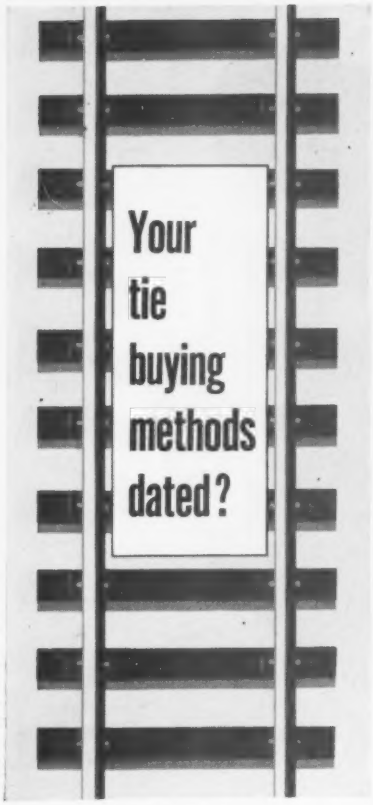

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Current Publications

PERIODICAL ARTICLES

BEFORE THEY DISAPPEAR. Fortune, March 1957, pp. 141-145. Time Inc., 9 Rockefeller Plaza, New York 20. Single copies, $1.25.

Shows, in color, some of the old and new insignias of several of the large railroads.

•

McCORD OF WESTINGHOUSE AIR BRAKE. Fortune, March 1957, pp. 146-147. Time Inc., 9 Rockefeller Plaza, New York 20. Single copies, $1.25.

Introducing the new chief of a major U.S. corporation.

•

PIGGYBACK GETS SET FOR A FAST CLIMB. Business Week, February 16, 1957, pp. 114-124. McGraw-Hill Publishing Company, 330 W. 42nd st., New York 36. Limited supply of tear sheets available free.

Discusses the complications involved, the plans in operation, and the outlook for piggybacking.

•

PIGGY-BACK ROUTING GUIDE. Distribution Age, January 1957, pp. 57-64. Chilton Company, Chestnut & 56th sts., Philadelphia 39. Single copies, 50¢.

The guide is arranged so the user can determine whether or not piggyback service is available between any two or more particular points. It consists of two principal parts—an index to points and a piggyback routing table. The index lists, alphabetically by states, the points to and from which TOFC is available. The table lists cities by code number and shows to what points piggyback is available from each originating city.

•

THE NEW AGE OF RAILROADS. Time, January 28, 1957, pp. 94-101. Time Inc., 9 Rockefeller Plaza, New York 20. Single copies, 20¢.

Discusses the "new look" on railroads and the problems they are still trying to solve. Contains several good colored action shots of railroad operations.

•

RAILROAD ISSUE of Financial and Public Relations Highlights, November 1956. Reuter & Bragdon, Inc., One Gateway Center, Pittsburgh 22. Free upon request on company letterhead.

In addition to providing a brief historical resume of the Pittsburgh & West Virginia, this special railroad issue seeks to focus attention on the problem of governmental regulation. It shows how this problem may have affected the shareholder relations of railroads generally; the current status of the problem; how it is being attacked; and the overall outlook for the railroad industry.

Will Better Service Require Some Inefficiency?

(Continued from page 54)

cated to handle economical trainloads, that is, maximum ton-miles with minimum train-miles. Progressive improvements have been made in roadway and equipment to increase train performance in terms of ton-miles and train-miles. Consequently, railroad operations by traditional yardsticks are highly efficient, but render a service that apparently is unsatisfactory for being irregular and slow. If the railroads intend fully to comply with shippers' needs, it will be necessary deliberately to adopt comparatively inefficient operating methods, as such methods are measured by traditional yardsticks. Such a reverse course of action would require radical changes in operating objectives and practices.

Q. What changes in operating methods might be advisable if the total transit time were to be substantially reduced?

A. The changes would affect the make up and movement of freight trains, according to the degree of improvement in transit time desired. In order to accomplish a substantial improvement the carload performance must be made of equal or paramount importance with train performance. For example, the maximum improvement in carload handling could be achieved by operating more frequent freight schedules as dependable as passenger train schedules. By analogy to passenger trains, tonnage standards would be completely disregarded, just as a passenger train is not held at stations until all seats are occupied.

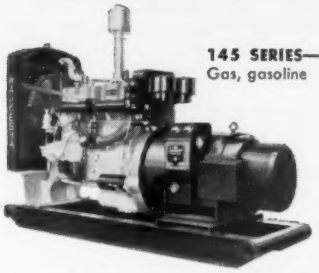
Q. The implications seem severe. Has any railroad or government agency explored the potentials involved?

A. Possibly, but I don't know. Really the subject is not forcefully before us. Railroads are doing a commendable job in train performance, and the dissatisfied shippers may use another mode of transportation.

Q. Mr. Jay, you railroaded for many years. If you don't mind a personal question, why did you leave railroad service?

A. Government service provides an opportunity to pursue a curiosity about marketing and logistics. Both activities are accomplished with railroad transportation, and really continue my railroad service.

WAUKESHA



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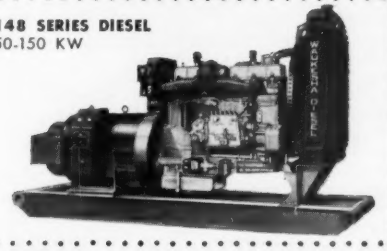
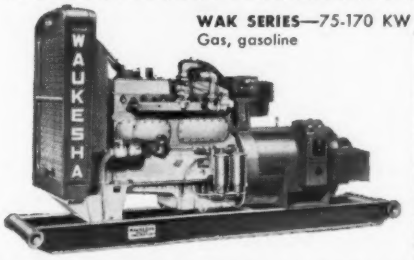


148 SERIES DIESEL
50-150 KW



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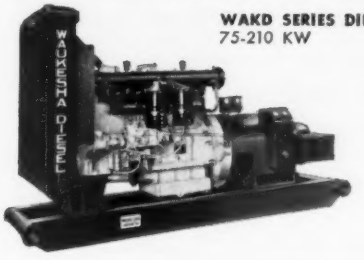

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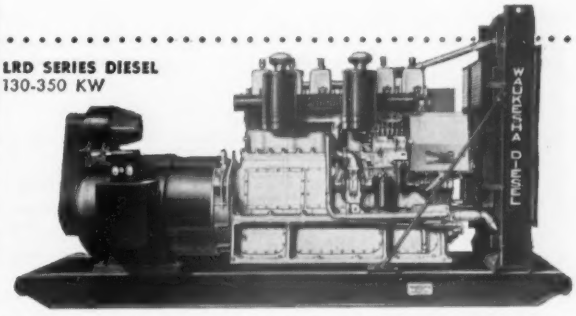

LRD SERIES DIESEL
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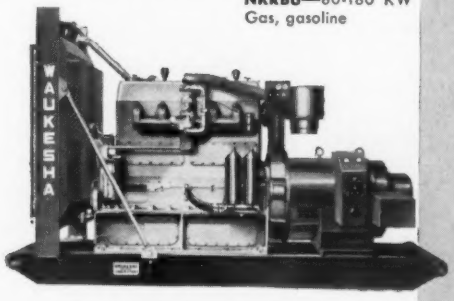
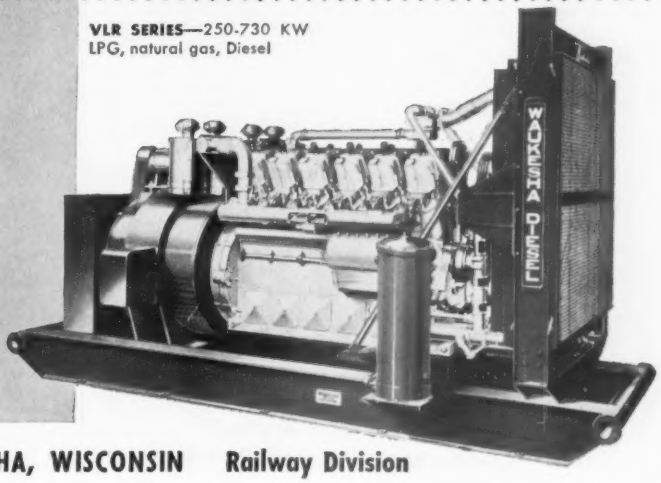


NKRBU—80-180 KW
Gas, gasoline



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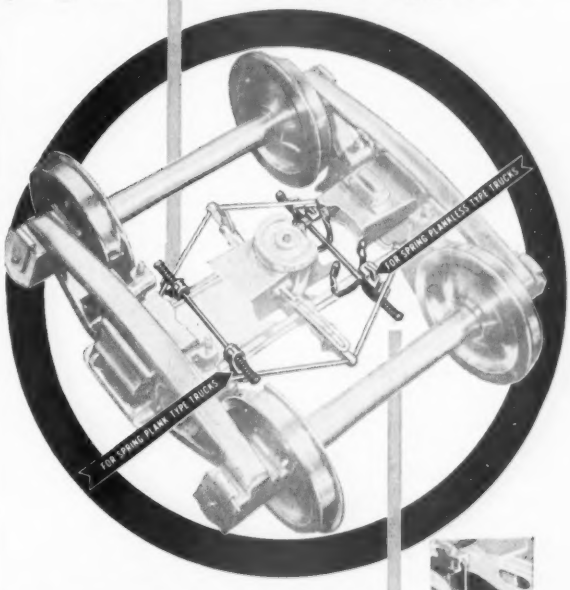

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Diversify—Mr. Arpaia Advises

Never before have so many railroad managements been so deeply convinced, as they are today, that railroad service ought to have closer connections than it now has with other means of transportation. The Southern Pacific has gone into pipeline transportation. The Chesapeake & Ohio has invested heavily in an air-freight carrier. Several railroads have entered into ocean shipping. Railroad trucking operations are being greatly extended, both directly and through "piggybacking."

Public Needs Integrated Service

Public policy, as reflected both in regulatory action and legislation, has retarded provision by railroads of other types of transportation—but there is evidence that at least some regulators are beginning to see the public advantage of greater coordination among the several types of transportation. For example, speaking at the University of Michigan on February 27, Commissioner Arpaia addressed himself to this question, in part, as follows:

"The railroads can no longer look upon their service as separate and exclusive. Some old-timers regarded the identity of a railroad as sacred and singular, to be preserved as a separate and distinct form of transport at any cost. In my opinion, because they are the predominant agency of transport, railroads should properly take the leadership in making transportation truly a functional and efficacious *system* rather than a collection of individual carriers of various types.

"Railroads own collectively almost 21 million acres of land. This is more land than there is in the whole state of Maine. About 4 million acres of this land is connected up in a private right of way which links every center of population from coast to coast and border to border. This constitutes a tremendous physical asset for themselves and the nation. To make the fullest use of it, railroads should recognize that our economic geography is not the same as it was a quarter of a century or more ago.

"While some of them are still cautiously temporizing, many railroads have now begun to associate with other media of transportation, either in combination or through coordination, and the ICC has encouraged coordinated service. Instead of thinking in terms of orthodox and conventional railroading, railroads are broadening their outlook and beginning to give vitality to transportation service. This is the real key to their future.

"Only by such steps can they help produce the best and cheapest service to the public and a greater and more secure future for themselves and all of public transportation. These steps are various and progressive. Substituted service by motor which is auxiliary and supplemental to rail service has already produced substantial benefits. To the extent that some of them have engaged in the use of railroad-owned trailers or containers on flat cars, they have made another distinct gain. It has given them an opportunity to give better and faster service with less damage and handling to shippers who need and want the advantage of trailer-on-flat-car service.

"Some of them have taken a further step to provide trailer-on-flat-car service in combination with motor common carriers. But until these steps are fully perfected and become equally applicable to connecting lines, the full benefits are lost.

"The fourth step is to work out a complete combination of services with every existing form of transportation. Up until now the railroads have been squeamish about entering into through routes and joint rates with independent motor carriers. There is only one railroad in the entire country which has done so. Yet common sense dictates that this is the one way that public transportation can make substantial and impressive advances. Furthermore, it would make unnecessary the issuance of some motor carrier certificates.

"Shippers want solicitude as well as solicitation for their freight. There is overwhelming evidence of the demand for a flexible, integrated, coordinated service.

"Railroads should encourage rather than resist developments in existing forms of transport and newer ones such as 'slurry' and liquid pipelines, 'rubber' railroads or conveyor belts, etc., or any others that may be invented at any time in the future. They should help perfect such new devices and bring them to the rails, rather than let them develop independently and pass them by until they become independent competitors.

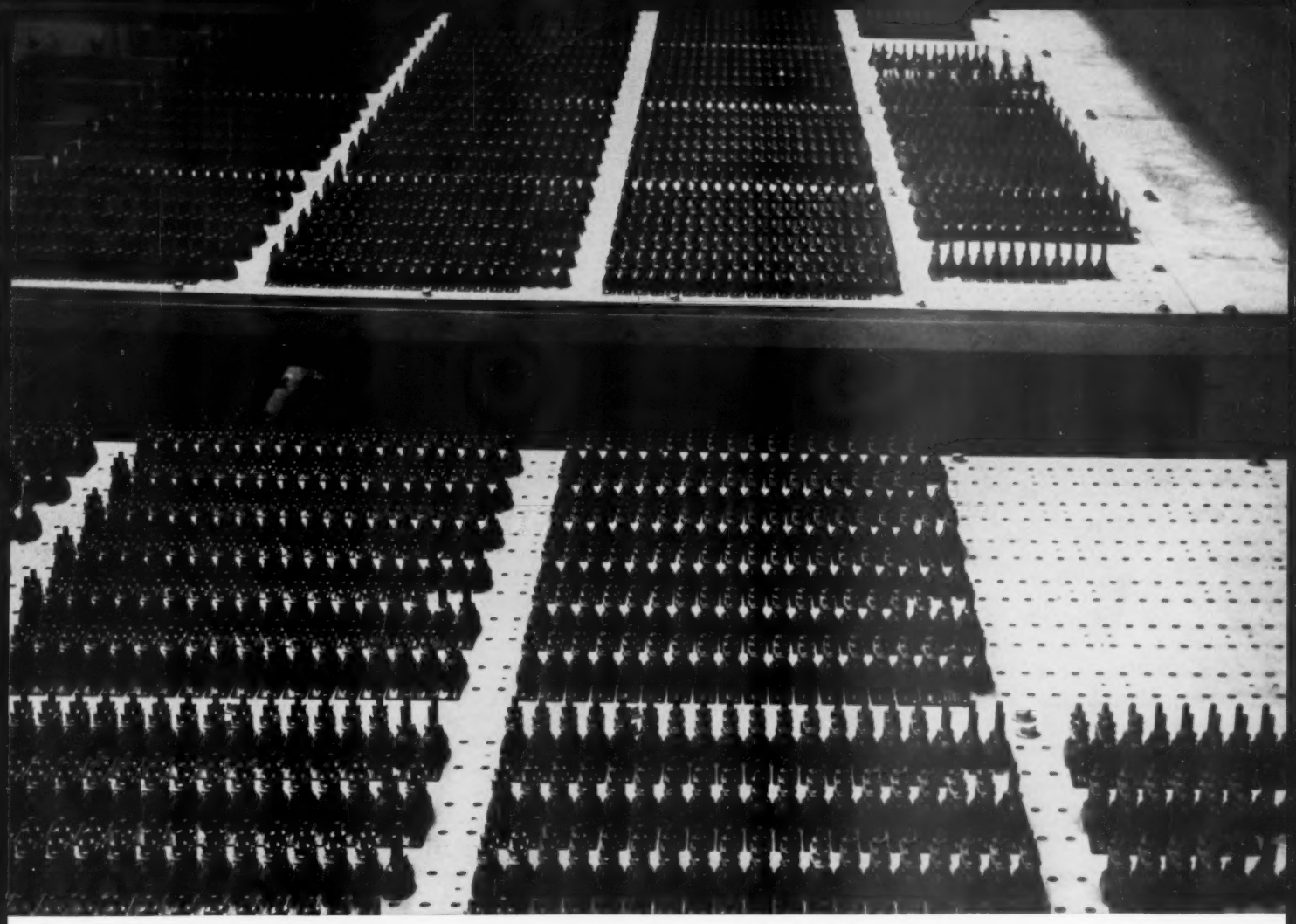
THIS RELATES TO:

- **1—Challenging competition**
- **2—Holding to high service standards**
- **3—Increasing internal strength**
- **4—Getting a higher level of earnings**
- **5—Improving tools and methods**
- **6—Seeking a friendlier environment**

Service Interchange Comes First

"Perhaps the railroads have the ambition to integrate all these services under their *ownership*, without first integrating the *services* now permissible. Such hope is premature until a competitive scheme of combined services is established. It also revives the suspicion that, once under their control, railroads would sacrifice developments and improvements of other types of transport to the detriment of the public. If the public became accustomed to efficient joint transportation services, resistance [to railroad ownership of other forms of transport] would evaporate. It would seem futile to try to resist or delay the inevitable. In one way or another, joint services of all forms of transportation will eventuate if the public is to be served."

It is highly significant that as influential a regulator as Mr. Arpaia should be thinking along lines which so closely parallel the opinions of many railroad leaders. With this kind of "climate" it oughtn't to be too hard to take some of this progress out of the realm of talk and translate it into action.



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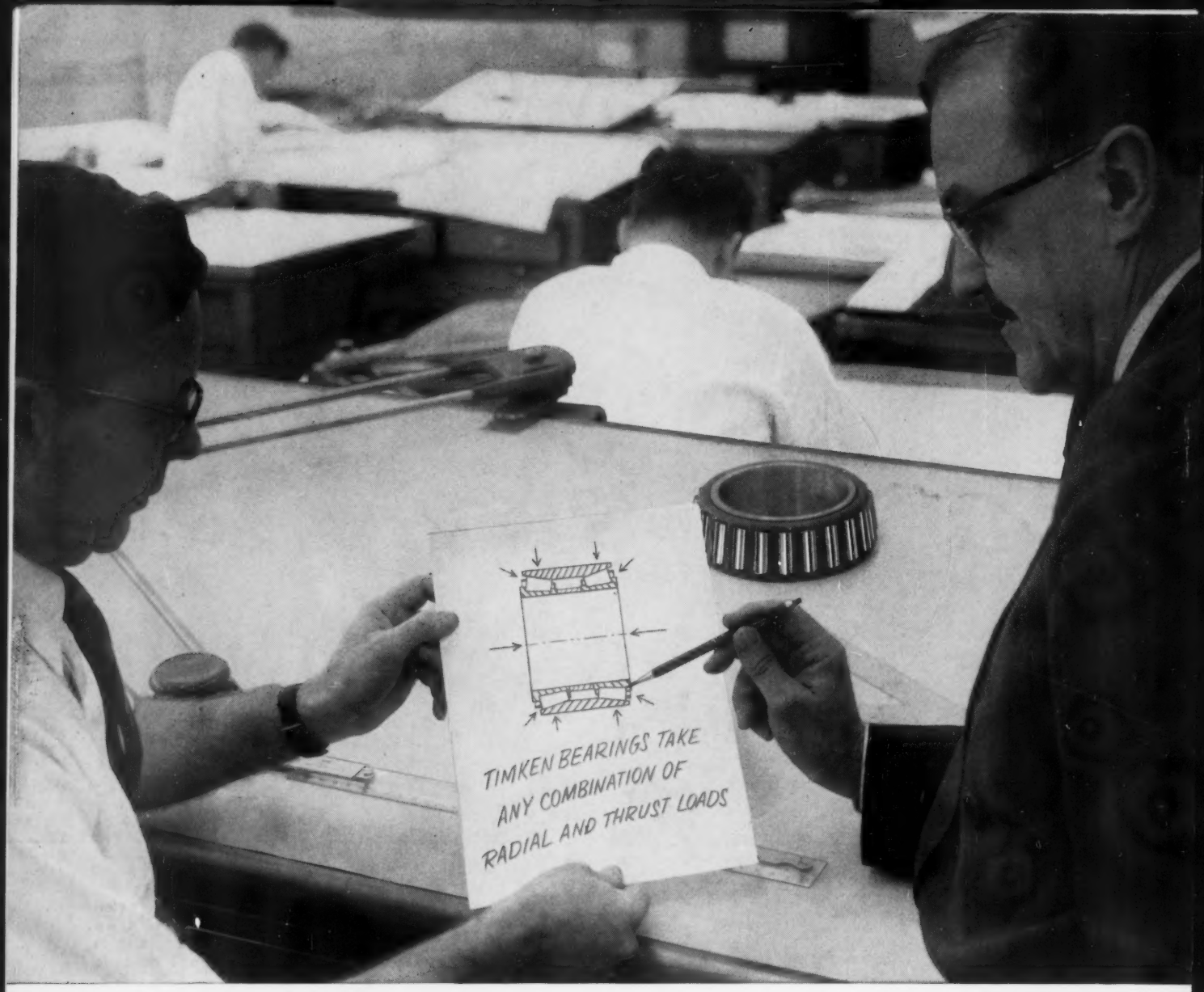

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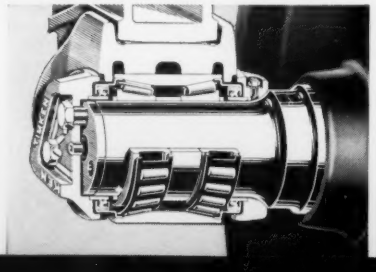

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